DOCUMENT RESUME

ED 218 314 TM 820 354

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TITLE	National Longitudinal Study of the High School Class of 1972 Study Reports Update: Review and Annotation.
INSTITUTION	Research Triangle Inst., Durham, N.C. Center for Educational Research and Evaluation.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
PUB DATE	Jun 81
CONTRACT	OEC-0-73-6666
NOTE	120p.
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	*Adolescent Development; Databases; Federal Programs; High Schools; High School Students; *Literature Reviews; *Longitudinal Studies; *National Surveys; *Research Reports
IDENTIFIERS	*National Longitudinal Study High School Class 1972

ABSTRACT

The National Longitudinal Study of the High School Class of 1972 (NLS) is an ongoing project focusing on the educational, vocational, and personal development of high school graduates, and the personal, familial, social, institutional, and cultural factors that contribute directly or indirectly to that development. A national probability sample of 19,001 seniors from 1,061 public, private and church-affiliated high schools participated in the base year study. Student questionnaires, a 69-minute student test battery, information forms, school questionnaires, and school counselor questionnaires were completed. The data files for the base year and subsequent surveys (1973, 1974, 1976 and 1979) have been merged for general public use. Researchers have used the data to investigate a diverse set of educational, vocational and social issues. The NLS 1972 Review and Annotation of Study Reports established an inventory of studies that had used the NLS database and summarized their findings. The present review (June 1981) has annotated and cataloged all of the NLS-based studies received from data users since the beginning of the study, summarized their major findings and, where appropriate, have made comparisons among the earlier and subsequent findings. (PN)

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ED218314

NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972 STUDY REPORTS UPDATE:

REVIEW AND ANNOTATION

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Prepared for the

National Center for Education Statistics
Office of the Assistant Secretary for Educational Research and Improvement
U.S. Department of Education

Contract No. OEC-0-73-6666

by

Center for Educational Research and Evaluation
Research Triangle Institute
Research Triangle Park, North Carolina 27709

June 1981

NATIONAL LONGITUDINAL STUDY
OF THE HIGH SCHOOL CLASS OF 1972
STUDY REPORTS UPDATE:

REVIEW AND ANNOTATION

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June 1981

FOREWORD

The National Longitudinal Study of the High School Class of 1972, a survey initiated by and conducted for the National Center for Education Statistics, began in the spring of 1972 with over 1,000 in-school group administrations of survey forms to a sample of approximately 18,000 seniors. In the follow-up surveys, the sample was augmented by almost 5,000 additional students from sample schools that were unable to participate in the base-year survey.

The data collected from the in-school and four follow-up surveys have been merged and processed. Over the past few years, a large number of independent studies using the NLS data have been completed or are in progress. These studies are annotated, reviewed, and summarized in this report.

The NLS data provide a series of repeated observations that will permit the examination of the relationships between schooling, work, and other experiences to subsequent career choices as well as educational and labor force participation of each of the selected individuals. Such information and the resultant analyses are important to those engaged in formulating legislative proposals and educational policy.

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ACKNOWLEDGMENTS

The authors wish to thank all those people who have contributed to this study and the writing of this report. Grateful acknowledgments are due, in particular, to Dr. Samuel Peng, primary author of the previous Review and Annotation of Study Reports (1977) and to Dr. George Dunteman, for his role in updating the summary of methodological reports and review of the document. Acknowledgments are also due to Dr. Bruce Eckland of the University of North Carolina at Chapel Hill, Dr. Andrew Kolstad and Mr. Peter Stowe of the National Center for Education Statistics, and Dr. John A. Riccobono, NLS Project Director, for their significant input and assistance. Special thanks are due to Mrs. Pam Mikels, for her expert assistance in the preparation of this report, along with Ms. Susan Jones and Ms. Barbara Elliott who provided excellent secretarial support.

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I. INTRODUCTION

A. Background and Purpose

The National Longitudinal Study of the High School Class of 1972 (NLS) is an ongoing project monitored and primarily funded by the National Center for Education Statistics (NCES), Office of Assistant Secretary for Educational Research and Improvement, of the U. S. Department of Education. The focus of the NLS is on the educational, vocational, and personal development of high school graduates, and the personal, familial, social, institutional, and cultural factors that contribute directly or indirectly to that development. The basic purpose of the NLS is the better understanding and documentation, by sequential observation, of a current generation of young people, of the forces and experiences that affect their development and adult attainment, with the hope of improving (through refined educational policy, programs, and practices) the probability that they may assume a productive and satisfying role in American society. A secondary purpose is to extend the general scientific knowledge of human development in the important years covering the transition from high school to adult career or life role.

The full-scale study began in the spring of 1972. A national probability sample of 19,001 seniors from 1,061 public, private, and church-affiliated high schools participated in the base-year survey. Each student was asked to complete a Student Questionnaire and to take a 69-minute test battery. Survey administrators were asked to fill out a record information form for each student, as well as the School Questionnaire which provided information about the school's programs, resources, and grading system. In addition, school counselors were asked to complete a special questionnaire designed to provide data about their training and experience.

The first follow-up survey began in October 1973 and ended in April 1974. Added to the base-year sample were 4,450 students of the class of 1972 from 257 additional schools that had been unable to participate earlier. Some 21,350 young people completed a First Follow-up Questionnaire, 69 percent by mail and 31 percent by personal interview. Of the 16,683 seniors who completed a Student Questionnaire, 15,635 took part in the first follow-up survey.

The second follow-up survey began in October 1974, when forms were sent to 22,364 potential respondents, and ended in April 1975. Some 20,872 young people completed a Second Follow-up Questionnaire, 72 percent by mail and 28 percent by personal interview. Of the 21,350 persons who completed a First Follow-Up questionnaire, 20,194 also participated in the second follow-up survey.

The third follow-up survey began in October 1976 and ended in May 1977. Third Follow-Up Questionnaires were mailed to 21,807 sample members. A total of 20,092 individuals completed Third Follow-Up Questionnaires, 80 percent by mail and 20 percent by personal interview. Of the 20,872 respondents to the second follow-up survey, 19,611 also responded to the third follow-up survey.

The fourth follow-up survey began in October 1979 and was completed in May 1980, with questionnaires sent to 20,862 eligible sample members. Supplemental questionnaires also were mailed to 5,548 sample members during the fourth follow-up survey in order to obtain key information concerning work and educational history that was requested but not obtained from previous surveys. In addition, a subgroup of about 5,000 sample members was retested during the fourth follow-up on a subset of the base-year Test Battery. A total of 18,630 sample members completed a Fourth Follow-Up Questionnaire, 77 percent by mail, 18 percent by field interview, and 5 percent by telephone interview. Of the 20,092 respondents to the third follow-up survey, 18,245 also responded to the fourth follow-up survey.

The data files for the base-year, first, second, third, and fourth follow-up surveys have been merged for general public use. Researchers in various government branches and other institutions have used the data to investigate a diverse set of educational, vocational, and social issues. While considerable useful information has been accumulated, the findings of the studies conducted often have not been effectively disseminated to the research community and the general public. Many written reports or documents involving the NLS data, except for those published in journals or presented at professional meetings, are generally accessible only to a small group of people. In an effort to facilitate the knowledge, availability, and use of the NLS data, RTI prepared a document in 1977 entitled *NLS 72 Review and Annotation of Study Reports*. The primary purpose of the review was to establish an inventory of studies that had used the NLS data base and to summarize their major findings. The intent of the inventory and summary was to address such questions as: What has been done with the NLS data and, as a result, what has been learned? Should more analyses be encouraged? If so, what subject areas need further research?

The previous Review and Annotation Report accomplished its objective and was well-received by researchers; it facilitated the exchange of ideas among NLS users and identified areas not being adequately investigated. Since its publication in 1977 many studies have been conducted utilizing the more recent third follow-up NLS data. Approximately 150 additional completed studies and 41 additional citations of studies in progress were collected, inventoried, and abstracted for inclusion in this updated review. The purpose of this report is to annotate and catalog all of the NLS-based studies received from data users since the beginning of the study, summarize their major findings and, where appropriate, make comparisons among the earlier and subsequent findings.

B. Procedure

For the 1977 Review and Annotation Report, RTI conducted a formal survey of NLS data users identified on the basis of lists supplied by NCES and mailing lists developed by RTI during the NLS operation. Additional information about uses of the NLS data came from informal contacts with a variety of people. The survey resulted in a list of over 120 individuals who were interviewed either in person or by telephone. During the interview, a number of questions relating to data file construction and suggestions for the future NLS surveys were asked. Individuals also were asked to forward any written NLS-related materials available for the purpose of review and annotation. Major professional journals also were searched to identify studies involving the NLS data. The initial effort resulted in the receipt of 150 documents for review.

For this updated edition of the report, RTI first prepared a revised mailing list that merged data users identified by NCES with a list of users and interested researchers that had been maintained at RTI. Packages were sent to 890 persons on the merged mailing list. These packages contained a letter requesting NLS related documents, an NLS bibliography, and a large postage-paid return envelope. A thank you/reminder postcard was mailed to everyone on the mailing list ten days later. Those persons who did not respond by mail were telephoned. As of January 1981, approximately 150 reports and 41 citations of studies in progress were collected including those reports prepared by RTI. These documents, along with those included in the prior Review and Annotation Report, are annotated, reviewed, and briefly synthesized in this report.

C. Overview of the Remaining Sections

The remainder of this report is divided into three chapters. Chapter II describes the NLS data base, including the sample size, data coverage in terms of content areas, time frame in which variables were measured, and accessibility of the data files. Chapter III summarizes the use of the NLS data to January 1981, including frequency counts of studies by various categories, a summary of the major findings from studies completed, and some suggestions for future research. Chapter IV presents an annotated bibliography, subject index, author index, and citations of studies in progress.

II. THE NLS DATA BASE

The NLS began with a stratified, two-stage probability sample representing the graduating high school class of 1972, with follow-ups in 1973, 1974, 1976, and 1979. To assist researchers in gaining an overview of the NLS data, this chapter briefly summarizes the basic information that would generally be required in designing an analysis—sample size and content coverage.[*]

A. Data Availability

Data contained in the data file currently available were collected from students representing 1,061 participating schools in the base-year survey, 1,300 schools in the first follow-up survey, and 1,318 schools in the second, third, and fourth follow-up survey. The number of students from each school is 18 or less.

Table 1 shows the patterns of data availability in the data base. It presents the amounts of data available for each instrument independent of the others (columns 1 to 7) and for various combinations of the instruments (columns 8 to 15).

It should be noted that missing data for individual questionnaire items are not documented in this report. Although the missing data problem may not be serious enough for most variables to hamper analyses, it may still impose some constraints when several variables are required simultaneously in an analysis. The information for missing data of each variable can be obtained.

There are over 3,500 variables contained in the data file. Some variables were measured at one point in time, while many others were repeatedly measured. To be fully aware of the coverage of the data content, one should examine the survey questionnaires. Table 2 on the following pages summarizes the content of the NLS data base. The table also shows the longitudinal nature of the data and temporal sequence of certain variables, which is particularly important in causal modeling analyses.

B. Accessibility of the Data Base

The base-year, first, second, third, and fourth follow-up survey data have been merged, and the data file is available for public use. It consists of 22,652 records. Each record is 11,463 bytes long and contains 3,522 variables. Two reels of tape are required to hold the data file using a recording density of 6,250 bytes per inch. Information regarding data tape purchasing can be obtained by writing to the Data Systems Branch, National Center for Education Statistics, Washington, D.C. 20402.

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[*] For a detailed description of sample design, data collection procedures, data processing, and instrumentation, see the *National Longitudinal Study: Base-Year (1972) Through Fourth Follow-Up (1979) Data File Users Manual* (Riccobono, Henderson, Burkheimer, Place, and Levinsohn, 1981).

[†] There is a Tabular Summary of Questionnaire Data from each survey (see Chapter IV).

Table 1. Data availability for subpopulations by instrument completion (N = 22,652)

Subpopulation	Total Instrument Completion							Pattern of Instrument Completion[a]							
	TEST	SRIF	BASE	1st	2nd	3rd	4th	BASE, 1st, 2nd, 3rd, 4th	1st, 2nd, 3rd, 4th	1st, 2nd, 3rd	BASE, 2nd, 3rd, 4th	BASE, 1st, 2nd, 3rd	BASE, 1st, 2nd	BASE, 1st	BASE Only
SEX:															
Men	7,899	10,768	8,281	10,484	10,244	9,820	9,041	6,184	2,069	286	248	625	324	245	219
Women	7,956	10,935	8,397	10,858	10,623	10,240	9,582	6,796	2,317	231	165	507	284	228	217
Unclassifiable	5	35	5	8	5	32	7	0	0	0	0	0	0	2	3
RACE:															
White	12,301	16,511	12,847	16,376	16,095	15,463	14,559	10,397	3,417	327	322	706	430	347	287
Black	1,952	2,951	2,127	2,913	2,860	2,682	2,334	1,431	657	141	55	256	95	64	58
Other	1,549	2,010	1,648	1,940	1,897	1,776	1,591	1,152	311	49	36	168	83	48	68
Unclassifiable	58	266	61	121	20	171	146	0	1	0	0	2	0	16	26
H.S. PROGRAM:															
Academic	6,537	8,656	6,812	8,520	8,434	8,122	7,581	5,549	1,627	183	146	434	217	138	131
General	5,370	7,804	5,673	7,640	7,422	7,129	6,573	4,229	1,818	218	173	413	220	197	180
Voc Tech	3,952	5,257	4,197	5,151	4,994	4,806	4,447	3,202	934	115	94	285	171	139	128
Unclassifiable	1	21	1	39	22	35	29	0	7	1	0	0	0	1	0
ABILITY:															
Lowest Quartile	4,798	4,783	4,788	4,392	4,256	4,051	3,640	3,319	6	2	126	449	217	205	188
Middle 2 Quartiles	7,008	6,997	7,000	6,600	6,534	6,293	5,957	5,609	6	2	162	397	252	171	177
Highest Quartile	4,054	4,053	4,052	3,890	3,896	3,783	3,610	3,469	1	0	87	199	96	71	58
Unclassifiable	0	5,905	843	6,468	6,186	5,965	5,423	583	4,373	513	38	87	43	28	16
SES:															
Lowest Quartile	4,531	6,172	4,827	6,117	5,962	5,618	5,169	3,554	1,232	161	125	397	214	146	125
Middle 2 Quartiles	7,562	10,226	7,927	10,157	9,910	9,524	8,811	6,240	2,119	248	204	534	263	224	216
Highest Quartile	3,707	4,924	3,863	4,911	4,794	4,636	4,375	3,178	1,001	97	80	199	129	95	70
Unclassifiable	60	416	66	165	206	314	275	8	34	11	4	2	2	10	28
TOTAL	15,860	21,738	16,683	21,350	20,872	20,092	18,630	12,980	4,386	517	413	1,132	608	475	439

NOTE: Abbreviations used to represent each instrument are:

TEST = Test book
SRIF = Student's school record information form
BASE = Base-year student questionnaire
1st = First follow-up questionnaire
2nd = Second follow-up questionnaire
3rd = Third follow-up questionnaire
4th = Fourth follow-up questionnaire

[a] Only patterns of instrument completion which have an N > 400 are included in this table.

Table 2. Content areas in each survey

Content category	Spring 1972 base-year survey	Fall-winter 1973-74 first follow-up survey	Fall-winter 1974-75 second follow-up survey	Fall-winter 1976-77 third follow-up survey	Fall-winter 1979-80 fourth follow-up survey
Constitutional factors	Sex, birth date, physical handicap	Sex, birth date	Sex, birth date	Sex, birth date	Sex, birth date
Ability	SAT, ACT, and test scores (vocabulary, reading, math, letter groups, mosaic comparison, picture-number)				Retest (vocabulary, mathematics)
Socioeconomic status	Parental income, education, occupation	Parental education, occupation			
Home background	Number of persons dependent on parents, number of siblings in college, objects in home, language at home, parental expectation	Parental encouragement	Birth order, number of siblings		
Community environment	Type of community, distance of home from postsecondary schools	Type of community where individual lives	Type of community where individual lives, mobility and reasons	Type of community where individual lives, mobility and reasons	Type of community where individual lives, mobility and reasons
Ethnicity	Race, religion		Race		
Significant others	Relative importance of family, peers, school personnel to secondary program, postsecondary plans, quality of counseling services				
Activity status	Activity plans for Fall 1973	Activity status in October 1972, October 1973	Activity status in October 1974	Activity status in October 1975, October 1976	Activity status in October 1977, October 1978, October 1979 and supplemental data for activity status 1972-76

(continued)

Table 2. Content areas in each survey – continued.

Content category	Spring 1972 base-year survey	Fall-winter 1973-74 first follow-up survey	Fall-winter 1974-75 second follow-up survey	Fall-winter 1976-77 third follow-up survey	Fall-winter 1979-80 fourth follow-up survey
Educational attainment	Educational plans (entry, financial support arrangement), factors interfering with attainment, school choice	Educational status (degree, certificate received), factors interfering with attainment	Educational status (degree, certificate received), factors interfering with attainment	Educational status, graduate school application and entry, factors interfering with attainment	Educational status, graduate school application and entry, factors interfering with attainment
School characteristics	Secondary school size, student-counselor ratio, ability grouping or tracking, racial composition, college-going ratio, school SES, teacher qualifications, school facilities, counseling services	Postsecondary school control and type	Postsecondary school control and type	Postsecondary school control and type	Postsecondary school control and type
School experience	Time spent on homework, program of study participation in remedial and special services programs, school quality, courses taken, instructional strategies	Program type, major study area, full-time, financial aid programs, program duration	Program type, major study area, full-time, financial aid programs, program duration	Program type, major study area, full-time, financial aid programs, program duration	Program type, major study area, full-time, financial aid programs, program duration
School performance	Grade average, extra curricular activities	Grade average, dropout, transfer, satisfaction with schooling, total credits earned	Grade average, dropout, transfer, satisfaction with schooling, total credits earned	Grade average, dropout, transfer, satisfaction with schooling, total credits earned	Grade average, dropout, transfer, satisfaction with schooling, total credits earned
Work status	Type of work, hours of work, work plans for years after graduation	Resources used for job hunting, work type, hours/week, reasons for not working	Resources used for job hunting, work type, hours/week, reasons for not working	Resources used for job hunting, work type, hours/week, reasons for not working	Work type, hours/week looking for work
Work performance and satisfaction	Factors in career selection	Income, pay, and work conditions, satisfaction	Income, pay, and work conditions, satisfaction, application of job training	Income, pay, and work conditions, satisfaction, supervision, application of job training	Factors in career selection, income, pay, work conditions, satisfaction, supervision, application of schooling, training

(continued)

Table 2. Content areas in each survey – continued.

Content category	Spring 1972 base-year survey	Fall-winter 1973-74 first follow-up survey	Fall-winter 1974-75 second follow-up survey	Fall-winter 1976-77 third follow-up survey	Fall-winter 1979-80 fourth follow-up survey
Noncognitive traits	Self-concept, locus of control	Self-concept, locus of control	Self-concept, locus of control, maturity scale	Self-concept, locus of control	Self-concept, locus of control
Goal orientations	Work and educational aspirations, expectations, and plans; life goals	Work and educational aspirations, expectations, and plans; life goals	Work and educational aspirations, expectations, and plans; life goals	Work and educational aspirations, expectations, and plans; life goals	Work and educational aspirations, expectations, and plans; life goals, satisfaction with progress
Marriage and family	Plans to be a full-time homemaker, number of dependents	Marital status, number of dependents, income number of children had and expect to have	Marital status, number of dependents, spouse's education and occupation, income, number of children, items and home owned	Marital status, number of dependents, spouse's education and occupation, income, number of children had and expect to have, items and home owned	Marital status, number of dependents, spouse's education and occupation, income, number of children had and expect to have, items and home owned, their value
Opinions	Ratings of high school	Usefulness of specialized training in high school	Participation in political activities, consumerism, quality of life	Political activities, sex-role orientation, sex and race biases, rating of high school, satisfaction with postsecondary education or training	Political activities, sex-role orientation, satisfaction with education or training
Military	Plans for military service	Type, training, duration, satisfaction, plans	Type, training, duration, plans	Type, training, duration, plans	Type, training, duration, plans

III. REVIEW AND SUMMARY OF STUDY REPORTS

A. Extent of Use

The NLS data have been frequently used since the study began in the spring of 1972. As of January 1981, 320 reports have been identified; 279 are completed reports and 41 are identified as studies in progress (see Table 3).

The NLS was designed for use by the general research community (ranging from graduate students working on doctoral dissertations to Federal and state agencies or contract research firms). The majority of study reports presented here are products of grant or contract research. Presentations at professional meetings, particularly those of the American Educational Research Association and the American Psychological Association are an important outlet for research products. Since 1973, there have been several papers presented each year, 51 in all. In addition, timely information drawn from the NLS has appeared several times in the NCES and OPBE annual reports to the U.S. Congress.

The number of studies generated in academic settings has almost doubled in the last three years. As of January 1981, 44 unpublished dissertations or papers were found which used the NLS as a data source. There has also been notable increase in the number of NLS-based reports appearing in professional journal articles. In 1977, only 7 journal articles were identified; this number had grown to 32 by 1981. It is certain that, as the study matures, the extent of published and unpublished articles using the NLS data will increase.

The use of NLS data is growing continually. Table 4 shows that by the end of 1973, only 9 reports were completed, while by the end of 1980, 261 additional reports were completed.

Table 3. Types of reports involving the NLS Data to January 1981

Type of publication	Frequency
Books	3
Journal publications	32
Papers presented in meetings	51
Unpublished dissertations or papers	44
Government publications	30
Grant or contract reports	119
Studies in progress	41
Total	320

Table 4. Number of reports issued in each year[a]

Year	Number of reports issued
1972	2
1973	7
1974	15
1975	38
1976	53
1977	36
1978	41
1979	37
1980	41
1981 (by January 31)	8
Total	278

[a] These counts do not include studies in progress, and the date of one annotated study is unavailable.

What areas of research have drawn the most attention, and what areas have not been adequately investigated? To answer these questions, the study reports were classified by subject areas as shown in Table 5.

Clearly, there are a greater number of studies dealing with survey methodology and with postsecondary education, particularly regarding the question of access, than any other areas. Of the total 279 study entries, 69 are methodological and 87 relate to postsecondary education. A smaller number of studies concerned secondary education, vocational/technical education (particularly the impact of such training), labor force participation, and psychological development.

The number of studies alone may not be an adequate indicator of the extensiveness of research in an area because reports vary in length, in thoroughness, and in quality; thus, the studies should be read and evaluated as well as counted. Furthermore, the lack of study in an area may not necessarily reflect a lack of research interest. A thorough exploration of a comprehensive data base like the NLS will require more time, additional funding resources, and a wider participation by federal agencies and the community of social scientists.

NCES has been the primary sponsor of NLS based reports, as shown in Table 6. Since the follow-up data are becoming more concerned with educational outcomes, such as vocational attainment and

Table 5. Number of studies by subject area

Subject area[a]	N
General description (summary of survey data)	28
Labor force participation	27
Methodology	
Data collection procedures	18
Imputation and analysis strategy	11
Instrumentation	5
Measurement property	7
Nonresponse bias	4
Sample design and effects	18
Variable and file construction	18
Weight and calculation	5
Military service	4
Personal, career, or psychological development	27
Postsecondary education	
Access	68
Basic patterns of college attendance	3
Race and sex differences	6
Financial aid	24
Performance	37
Vocational-technical education	6
Secondary education	
Student characteristics	14
School or program effects	20
Women	9
Other (history, objectives, conceptual analysis priority, etc.)	25

NOTE: A report could be entered in more than one subject area, thus there are 384 entries for 279 studies.

[a] The classification of subject areas was based upon studies through January 1981.

Table 6. Number of studies by sponsoring agency[a]

Sponsor	N
National Center for Education Statistics	110
Department of Health, Education, and Welfare/Office of Education	25[b]
Private foundations	8
Department of Labor	6
Universities	4
Department of Defense	3
National Science Foundation	2
Minimum Wage Study Commission	1
Vice President's Task Force on Youth Employment	1

[a] This tabulation includes only government publications and contract and grant reports known to have been in existence by January 31, 1981. Some of the studies were supported by more than one funding source, therefore, 160 entries are listed for the 149 government publications and contract and grant reports.

[b] Includes studies funded by agencies such as the National Institute of Education, and the Office of Planning, Budgeting, and Evaluation. (The names of some Federal agencies involved in initiating and supporting NLS have subsequently changed as a result of various reorganizations.)

quality of life, it seems likely that other government agencies will begin using the data more extensively. The Office of Planning and Evaluation, National Institute of Education, Department of Defense, National Science Foundation, and other federal organizations have already begun to do so. It is possible that more studies will be initiated by other agencies as more longitudinal data become available, particularly those regarding career development and family formation.

B. Major Findings

The NLS has provided a unique data base for education and other social behavioral research. The repeated surveys on the same group of individuals not only provide timely cross-sectional information but also allow longitudinal analyses for certain issues. Over the past few years, as presented in the preceding section, a large number of independent analyses of the NLS data have been completed, and a considerable amount of information has been accumulated.

In general, the greatest emphasis thus far has been on that portion of the sample attending a postsecondary institution, with focus on access, aid, and persistence. The potential for psychological development studies is limited by the small number of psychological variables measured across time. Areas given less attention by researchers have to do with the subgroup moving directly into work or family responsibilities, vocational and career development studies, and patterns of labor force participation. Fourth follow-up data now available provide new information with which researchers can explore these areas as well as graduate school entrance and attainment.

This section summarizes the major findings from a number of the reports listed in the next chapter, with particular attention to the following areas: (1) student characteristics and high school experience, (2) access to postsecondary education, (3) performance in college, (4) labor force participation, (5) personal, career, and psychological development, and (6) methodological studies. Additional information regarding studies here and those not summarized here can be found in the next chapter.

Within the text of the synthesis of major findings, the numbers of the study annotations are given in parentheses following the author's name. The reader should refer to the annotation if additional information about the study is desired.

1. Secondary Education: Student Characteristics and Effects of High School Experience

The NLS sample represents about three million individuals who were high school seniors in 1972. About 82 percent of the sample are white, 9.5 percent are black, and 8.5 percent are members of other minority groups. The sexes are equally represented for whites, but black males comprise only 45 percent of all blacks in the sample, suggesting higher than average attrition rates for black males in kindergarten through twelfth grade.

Although these high school seniors participated in various types of school programs and had different experiences, in 1972 they reported that they were generally satisfied with their high school education. However, that attitude has changed somewhat over the intervening years. According to the responses from the 1976 survey, nearly two-thirds of the class of 1972 believe their school should have placed more emphasis on vocational programs and practical work experience (Eckland & Wisenbaker, 10).

The notion that NLS respondents as seniors felt an inadequate preparation for the labor force was supported by two recent studies that investigated the educational and occupational aspirations of the NLS high school seniors. Ross (245) found that the aspirations sample members reported during high school are not only incongruent with their early adult behaviors, but are vastly inconsistent with the realities of the job market possibilities. For example, the study found that more than one-third of the 1972 students expected to be employed in professional and related jobs by age 30; when in fact, only twelve percent of employed persons were actually working in professional and related jobs in 1970. Ross also examined the association between community of residence (rural/urban) and the educational and occupational aspirations when differences in sex, ability and socioeconomic status are taken into consideration. The findings suggest that residential differences have only a slight effect on occupational preferences. A study by Kominski (238) sought to determine the various effects of social-psychological and education-related variables on personal aspirations. The findings revealed that key factors in the formation of NLS sample members' educational and occupational aspirations were (a) mother's occupational desires for their children and (b) self-assessment variables (defined as confidence in self to complete college and when the decision about college was made). Another important finding concerns the distinction of a black male status attainment model from that of three other groups (black females, white males and white females). While the models of these three groups tend to emphasize both social-psycholgical factors as well as factors to which education is closely related (grades, coursework, occupation, aspirations, SES), the black male model differs in that although the social-psychological factors continue to play a key role, the education-related factors do not. Instead these factors appear to be displaced by basic ability factors (aptitude) and relative ability factors (sports participation and class rank). The study raises the question, as do other studies found in the literature, why certain traditional factors known to influence achievement and aspirations for most of the population fail to have any significant effect for black males.

Of the class of 1972, about half of the white students and a quarter of the black students were enrolled in academic programs in high school while about half of the black students and 29 percent of white students were enrolled in general programs; the remaining students were enrolled in vocational/technical programs. Echternacht (228) examined the characteristics of these students and found that both vocational and general students scored lower than academic students on the academic ability tests. Compared with general students, vocational students achieved higher grades, were less alienated toward school, and focused more in their postsecondary aspirations on the work world.

Other investigations related students' background characteristics to academic ability and grade performance, e.g., Creech, Echternacht, Freeberg & Rock, (227); Fetters, (11) (13) (14). In general, the findings are consistent with previous studies: women slightly outperformed men in reading, but men slightly outperformed women in mathematics; blacks scored about one standard deviation below whites in academic ability tests, and students of higher socioeconomic background (SES) had higher test scores than did students of low SES. The median class standing of females was about 17 percentage points higher than that of males. Females had better academic credentials than males; however, females had lower college-going rates and lower educational and vocational aspirations than males. The comparisons (male to female and black to white) are comparisons of group means. Another factor affecting academic success is participation in high school athletics, according to Hanks (237). This study strengthens the existing evidence that participation in school sports programs has basically positive effects on the educational achievement of high school students. The experience is clearly more important for black and white males than for females, especially in regard to college attendance.

Several studies have addressed the important issue of whether differences in school programs matter in terms of the students' subsequent life experiences. The results indicate that differential school experience does have an impact on both college and work. Rosenbaum's (244) investigation of the effects of actual high school tracks and students' track perceptions found that students often misperceive their tracks and that their track perceptions significantly underestimate tracking's relationship with important antecedents (particularly the effect of aptitude on track) and with important outcomes (particularly college attendance).

Additional evidence of high school effects was presented by Thornton & Eckland (249) who found that the socioeconomic status (SES) and ability contexts of a high school differentially affect the college-going experience of blacks and whites. Two studies concerning the issue of school racial composition and its effect on college attendance produced conflicting results. Crain & Mahard (225) reported a regional interaction effect indicating that black graduates of predominantly white high schools (effects of desegregation) in the north are more likely to attend and remain in college than are their southern counterparts. The results also indicated higher achievement test scores for blacks attending white high schools, but only in the north. Those findings have been disputed in a subsequent study by Eckland (230). Using the same data, but re-specifying the model, Eckland found that the detrimental effects of school desegregation not only appear in the north but are more severe there than in the south.

Regarding the distribution of school resources and their effects on cognitive performance, the general conclusion reached by Ahern (223) after examining a variety of school resources, was that discrepancies existing between different racial-ethnic groups are nominal, particularly in those areas presumably most directly related to learning, such as the instruction available to students and equipment in the classroom.

Based on the idea that important racial differences exist in the social-psychological model of educational attainment, Thomas (211), Thornton (215) and Lindsay (175) examined data for blacks and whites separately concerning the development of college plans. Results of these studies reveal that, before leaving high school, blacks (controlling for ability and SES) are *more* likely than whites to have been encouraged to go to college by their parents, teachers, and counselors, to have friends who planned to go to college, to believe that they had the academic ability to do college level work, and, even independent of all these factors, to be planning to go to college. In terms of educational expectations the following racial differences were noted: the influence of peers and academic self-concept are equally important for whites and blacks; however, influences of curriculum enrollment, high school grades, and SES background on college plans were substantially greater for whites, while the influences of teachers and counselors and ability test scores are greater for blacks.

Peng (243), in a study of NLS sample members who had enrolled in specialized job training programs in high school, found that receiving job training in high school correlated positively with occupational attainment and income. Students who had experienced job training were more likely to be employed and had a higher median income than those who had not. Bowers, Pierce, Blitch & Carr (142) and Peng & Fetters (194) also showed that high school programs are related to college entry and college performance after other variables such as socioeconomic background, ability, and aspirations are controlled. High school programs provide students with different academic preparation which, in turn, has an impact on college entry and later performance. The effect of high school size on student participation, satisfaction and attendance was studied by Lindsay (240). The results show that rates of participation in four types of extracurricular activities, two measures of student satisfaction and attendance are found to be higher in smaller schools.

2. Postsecondary Education: Access

Access to postsecondary education has been the subject area most widely studied by researchers using the NLS data. The findings can be grouped into five areas: (a) changing patterns in college attendance, (b) race and sex differences in college attendance, (c) delayed entry to higher education, (d) where students go to college, and (e) financial aid.

In the studies to be summarized in this section, postsecondary education generally refers to enrollment in an academic program at a two- or four-year institution. Thus, unless otherwise noted, enrollment in nonacademic programs is excluded from consideration.

a. Changing patterns of college attendence

Peng (185) reports that in recent years the rates of enrollment for high school students who continue their education after graduation has declined slightly at four-year institutions, while nearly doubling at two-year junior and community colleges. Overall, the proportion of high school graduates entering college has risen only slightly between 1960 and 1972 (from 41 to 43 percent). While those rates of attendance continue to vary by sex and social class, some interesting changes have been noted. In 1972, men were still more likely to attend college than women, although sex differences in attendance rates dropped from 9.4 to 3.7 between 1961 and 1972. Over this same period, social class differences have been reduced, yet the four-year college attendance rate for students in the top SES quartile is still about double that for students in the bottom SES quartile.

The talent loss problem that occurs when able students do not attend college has been of considerable interest to educators. Peng (185) found that the proportion of highly able students going to college has declined in the past 10 years. In 1961, 70 percent of men and 63 percent of women in the top ability quarter of their high school class attended four-year colleges compared to 54 percent for men and women in 1972. Studies by Burkheimer, Jaffe, and Peng (144) and Peng, Bailey, and Eckland (188) examined the reasons why able students did not attend college. Their findings reveal that low educational expectations are a strong predictor of college nonentry at all ability levels, but markedly less predictive for low ability students than for the high or middle ability groups. Early marriage was also strongly related to not attending college.

b. Race and sex differences in college attendance

The NLS data base has provided researchers with a rich source of information regarding the shift in race and sex differences in college access during the 1970's. The task of researchers is to assess the relative importance of race, sex, and other background and school variables in the educational attainment process as students move from high school to college. Many of the investigations thus far have tended to focus on race and sex differences either by introducing these respondent characteristics as dummy variables into a multiple regression analysis or by conducting separate but parallel analyses of different groups of respondents classified by race and sex (Thomas, 209; Thornton, 215; Jackson, 167). In the first approach, the investigator is interested in estimating the relative effects of being a woman (or man) and of being black (or white) at different points in the educational process. In the second approach, interest is focused on differences and similarities in the underlying causal mechanisms that may help explain the variance in outcomes between subgroups.

Findings of the more recent studies (Eckland, Lindsay, 157; Thomas, Alexander, Eckland 213; Peng, Dunteman 189; Peng, Bailey, Eckland 188; Thomas 209) concerning race and sex differences in college attendance are generally in agreement with and strengthen the conclusions of earlier studies using NLS data. The results show that although whites are more likely to attend college than blacks, the difference can largely be attributed to class background and academic credentials. When blacks are compared to whites of similar status origins and scholastic ability, blacks are more likely to attend college.

Earlier studies showed the existence of a positive net effect of being black on college attendance, in part due to the advantage that accrues to blacks by being more likely than whites with comparable academic ability to be placed in a college preparatory curriculum and to receive better grades in high school, but it also reflects a net positive advantage of being black on college attendance independent of the student's social background or academic credentials. However, a more recent report (Thomas 210) found that although the direct effect of race on college attendance indicates a modest advantage for blacks the effect is largely mediated by the school process variables, by the influence of significant others, and by student's educational expectations.

College attendance patterns among NLS seniors showed significant race by sex interactions. Sex differences were found to have reversed effects among whites and blacks. Although white women receive better grades and are ranked higher in their class, white men are still more likely to attend college. In contrast, black women are more likely to attend college than black men, perhaps linked to the fact that black women get better grades in high school.

The studies in this area indicate that social class background is far more predictive of college entry than either race or sex. The strong depressant effect of low socioeconomic status on college attendance substantially affect the chances of college entry for the low SES student regardless of sex, even if he or she had good grades, high aptitude and was enrolled in an academic curriculum.

c. Delayed entry to higher education

A recent study regarding delayed entry shows that of all students enrolled in college anytime after high school graduation, 21 percent delay their enrollments, but 29 percent of those in the lowest SES quartile postpone entry at least one year (Selby and Froomkin, 205).

Other than Bower's (142) report in 1977, little research has been performed examining the process that leads to delayed entry. Bowers found that, in general, the basic factors involved in delayed entry do not differ substantially from those for immediate entry. That is, academic curriculum, academic aptitude, and rank in high school class are among the highest correlates of college entry, whether delayed or immediate. Also, in both cases, the influence of social class and significant others such as parents and peers, as well as the level of education the respondent desires, all have modest but significant effects on college attendance.

More interesting, perhaps, are the influences of marriage and earned income, both of which have negative effects on immediate college entry. Respondents who were married after high school were less likely to enter college in fall 1973 than those who were single. Similarly, those with higher incomes were less likely to attend. Thus, it appears that relatively high income for students who do not go on to college immediately after high school may serve as an alternative opportunity to attending college. Marriage also may represent an alternative to college or it may increase the need to generate additional income.

d. Where students go to college

The rate of college enrollment for high school students has declined slightly at four-year institutions and declined markedly at vocational/technical schools in the last ten years, while nearly doubling at two-year junior and community colleges. Although, on balance, the trend in enrollment decreased considering all forms of postsecondary education, it increased in degree-granting institutions. Approximately 43 percent of the NLS high school graduates entered degree-granting institutions in fall 1972 compared to about 41 percent a decade ago (Peng, 185).

About 29 percent of all NLS respondents attended four-year institutions immediately after graduation from high school, 14 percent attended two-year colleges, and another 10 percent enrolled in vocational and technical schools (Peng 185). Several studies investigated differences in the chararistics of students attending different types of institutions (e.g., Bowers et al., 142, Peng and Dunteman 191), including two studies which ranked colleges using Astin's selectivity index (Bailey & Collins, 138 and Lindsay's 1978 report 239).

As expected, two-year junior and community colleges tend to attract students of lower ability and those from somewhat lower SES backgrounds than do four-year colleges. It appears, however, that the increase in two-year college enrollments over the past decade was more evident among middle class and middle ability students than among low SES and low ability students. This may reflect both the increasing availability of these institutions and the rising costs of attending a four-year college. Some authors have noted that these middle-range groups may not be poor enough to receive financial aid grants and yet do not have the ability to win academic scholarships or wealthy enough to pay the costs of a four-year, residential college.

Controlling for academic ability, blacks are more likely than whites to enroll in four-year institutions, while whites are more likely than blacks to enroll in two-year junior and community colleges. For example, 7 percent of whites and 16 percent of blacks in the lowest ability quartile enrolled in four-year colleges. For other test quartiles, the black advantage in four-year college attendance ranged from 11 to 27 percent. Similar results were obtained for Hispanics, although the attendance rates for this group were higher than those for whites at both four-year and two-year institutions, controlling for academic ability.

Similar results are obtained when a college selectivity index is used instead of the simple two-year versus four-year distinction and the analysis is restricted to students entering four-year institutions. Consistent with the results of other studies reported earlier, proportionally more whites than blacks who attend four-year colleges are attending highly selective institutions. However, when academic ability is controlled, just the reverse is found. For example, 24 percent of all white four-year college students in the top ability quartile were enrolled in the higher ranked colleges, as compared to 43 percent of the blacks in this quartile. Moreover, 3.6 percent of the blacks in the lowest ability quartile attended a selective college, compared to 0.3 percent of the whites.

Some interesting results show up for the low selectivity colleges. First, it should be noted that about one-half of the four-year college student population in the United States attend schools with low selectivity scores on Astin's scale (i.e., institutions with selectivity levels of 0, 1, and 2 on an eight-point scale). These institutions are largely undifferentiated from one another with regard to the caliber of students they admit, probably as a consequence of relatively open admission policies that do not require admissions tests except for counseling and guidance functions. The bulk of all blacks attending four-year colleges (71 percent) end up in this class of institutions, including about one-half of those in the top ability quartile, while only 49 percent of white four-year college students attend these low selectivity colleges. This phenomena is a function, according to Eckland (230), of the disproportionate number of blacks who continue to attend predominantly black colleges and the very low ranking of these institutions on the selectivity scale (Bailey & Collins 138).

e. Financial aid

The amount of financial aid available for students pursuing postsecondary education has grown dramatically in the past decade. The substantial increase in public monies being spent toward subsidizing higher education has stimulated inquiries into the effects of aid on student enrollment and subsequent educational attainment.

An early study by Riccobono et al. (199) indicated that just over a third of the NLS students enrolled in some form of postsecondary education in 1972 received some form of aid other than family and personal support. About half of the aid came from federal sources; the rest came from nonfederal sources. The type of postsecondary school one attended, however, was an important factor. Students entering four-year colleges were much more likely to report receiving both federal and nonfederal aid than were students enrolled in two-year institutions. Differences by SES and ability also were found. Those from lower income families, were more likely than students from higher income families to receive both nonfederal and federal aid, but particularly the latter. Ability, on the other hand, was positively related to receiving nonfederal aid for four-year college entrants, while negatively related to receiving federal aid. That is, there was a tendency for more students in the lower ability quartile to receive some form of federal support than for those in the upper ability quartile. This can be attributed in part to the correlation between ability and SES; those with greater financial need tend to have lower test scores.

Jackson (165) sought to determine what needy students would do in the absence of aid or how the availability of aid would affect the aspirations of a potential student. Results revealed that a college applicant offered aid by the college of his or her choice has a higher probability of attending college than similar applicants not offered aid. The data imply that the award of aid is more important than the amount, but to efficiently increase enrollment, aid must be given to highly responsive subgroups who do not already enroll without aid (e.g., low SES students). Jackson's overall impression regarding the effectiveness of financial aid as a persuader for college enrollment is somewhat pessimistic. Another study that supports the idea that financial aid has little bearing on enrollment was conducted by Doerman (150) who examined the family incomes of the able high school graduates who did not go to college. Findings revealed that the pool of students who would be predicted to have the least difficulty in college but were not enrolled is over twice as large among families who can probably afford to send their children to college than among those who cannot.

In a related study, Jackson (166) investigated how students pay for college. The report shows that as a trend between 1967 and 1977 students' reliance on parental financial support diminished somewhat; students received more grants and aids, worked more, and chose to attend subsidized colleges. Since many students have a need for financial aid in order to pursue postsecondary education, important questions arise: do the neediest students receive the bulk of federal aid? Do subsidies increase college enrollments? To answer such questions, examination of the effects of the Federal government's Basic Educational Opportunity Grants (BEOG) Program on college enrollments was conducted by Fuller et al. (160). The analyses estimate that in 1979, 41 percent of the low income students who received BEOG awards would not have enrolled in postsecondary schools in the absence of the program. On the other hand, only 17 percent of enrollments of middle income recipients and 6 percent of enrollments of high income students can be attributed to BEOG's existence. According to this report, since 40 percent of the $1 billion in BEOG money awarded to freshmen in 1979 was received by middle and upper income students, it appears that a very significant portion of the BEOG budget in 1979 was spent as pure subsidy.

The varied focus of additional reports investigating financial aid revealed some interesting findings. For example, Barnes and Neufeld (140) examined the issue of whether or not undergraduate student financial aid is in fact based on financial need. The authors suggest that measures of financial need are only weakly related to the likelihood of a student's receiving an aid offer or to the amount of aid offered. Such a finding has negative implications for the efficiency of the process by which students search for a college to attend. Brown's (143) analysis of the dropout rates of student loan users compared with users of other forms of financial assistance found that the type of aid (loans only, loans and other financial aid, grants and scholarships only, familial resources only, or part-time work) received in the first year of postsecondary schooling seemed to be a critical factor in affecting dropout rates. In general, the loans-only group of students and the familial-aid-only group had higher dropout rates than those in the groups using loans in combination with other aid. Thus, it appears that support carrying greater degrees of personal risk, such as loans only and family aid only are generally associated with higher dropout rates, and this is more particularly the case for lower SES than for higher SES students.

Catsiapis and Peterson (145) investigated the determinants of parental contributions for student's postsecondary education in order to assess the effectiveness of the federal government's policy toward granting student aid. Findings revealed that students with the capacity to finance their education "internally" (using family funds) will be at a comparative advantage. The authors hypothesize that at least part of the "parental contribution" may simply be an implicit (or explicit) financing arrangement between the parents and the student. That is, based on individual characteristics, financial aid offers, and the opportunity cost of funds from other sources, the student makes a decision regarding the choice of school as well as the optimal amount of expenditures. Having made the "investment decision" the student then must finance the difference between total expenditures and the financial aid award. Family funds is just one of several sources of finance. The amount used from this source will depend on the opportunity costs of the family's funds as compared to the cost of funds from other sources (such as government loans, bank loans, work study, part-time employment).

3. Performance in Postsecondary Education

A considerable amount of information about the postsecondary education performance of the NLS seniors is now available. Investigators are continuing to trace the progress of respondents as they move through college and into the labor market. The studies summarized under this section address a variety of issues relating to postsecondary performance, including (a) choice of college major and (b) persistence in higher education, college transfers, and withdrawals.

a. Choice of college major

Students' choices of college major eventually affect the pool of those persons qualified for specific jobs entering the labor force. Recent pressures for affirmative action hiring policies throughout the labor market have pointed to a shortage of women and minorities in certain fields of study. Hence, researchers have begun to address the question of how and why women and minorities make decisions regarding a college major.

Polachek (197) and Peng and Jaffe (255) studied sex differences in the choice of a college major. Polachek examined vocational aspirations, ability and the content of high school and college courses and found that women tend to specialize more in English and language, while shying away from math and science. Although they spent more time at homework, they spent less time at part-time work outside of school and, as adolescents, were less interested in careers than were men. With respect to choosing a particular field of study in college, students with greater quantitative ability tend to major in math, science, engineering, and medically-related fields, while those with high verbal ability choose humanities and social sciences over other fields. Moreover, those with more pre-college background in a particular field were more likely than others to choose that field as a major in college. Even when adjusting for ability differences and other background variables, however, women tend to major in education, home economics, and medically-related professions such as nursing, while men tend to major in engineering and business.

Peng and Jaffe report similar results in their study of women who enter male-dominated fields of study. It was found that, compared with college women in other fields, women in a traditionally "male" field of study (e.g., engineering) have greater mathematical aptitude and a stronger high school background in math and science. They also have higher educational expectations and tend to be oriented more toward success in the world of work.

Dunteman et al. (154) found that males are three times more likely to major in the physical sciences and 36 times more likely to major in the engineering sciences than are females. In regard to race differences, it is clear that blacks are underrepresented in the sciences; however, the differences between males and females in the choice of selecting a freshman science major are greater than those between blacks and whites. An interesting finding was that, overall, black females are more highly represented than white females in the sciences, although the higher overall percentage for blacks is due primarily to their overrepresentation in the social sciences.

In related reports by Bethune (141) and Weaver (220), the authors examined factors related to the choice of education, a female-dominated profession, as a field of study. The results are consistent with previous research in suggesting that the study of education tends to attract students who rank lower in academic performance and SES than do other fields. One interesting finding that is contrary to earlier studies was that black females are less likely to choose education than other fields.

The research suggests that the process of status attainment including college choice, among racial groups and between males and females is different (Lichtman et al. 174). For example, it appears that there are differences in the factors affecting white and non-white women with respect to their decision to pursue mathematics-related fields of study.

b. Persistence in higher education, college transfer and withdrawal

The third follow-up survey results show that about one person in six had obtained a bachelor's degree or attended graduate or professional school by October 1976. Some of those students who did not finish were dropouts, although many were still pursuing a college degree. Examination of the data reveals that educational expectations are very strongly related to educational attainment. Of those expecting only high school completion or less, only 14 percent had ever attended college, and fewer than 1 percent had obtained a bachelor's degree. Of those respondents expecting to attend graduate school, 94 percent had attended college by October 1976; 44 percent of this high expectation group had already obtained a bachelor's degree or been enrolled in graduate or professional school (Eckland & Wisenbaker, 10).

A substantial portion of the students who had enrolled in college in the fall of 1972 were still studying for a bachelor's degree four years later. The number of students still attending college in October of 1976, however, is substantially larger when the delayed entrants are considered. Altogether, there were more NLS respondents attending college as undergraduates in 1976 (17 percent) than had obtained a bachelor's degree four years after high school (16 percent). It appears that many students delayed entry into college a year or more after leaving high school, and, of those who entered college immediately after high school, many dropped out for an unspecified period and later returned. Eckland and Wisenbaker (10) support the conclusions of another study regarding the phenomena of "stopping out" of college. Hilton (164) also found that the practice of "stopping out" is common. Only about 25 percent of students entering college immediately after high school graduation continue to attend without interruption.

Peng (185) in his study of college transfers found: of those who originally entered two-year colleges, 24 percent were attending a four-year college two years later, and 4 percent were enrolled in a different two-year college; among those entering four-year colleges, 16 percent had transferred to another four-year college while only 3 percent had transferred to a two-year college two years later. The four-year college students who transfer to another four-year college tend to be from higher socioeconomic backgrounds, and have lower aptitude, but perform better than their classmates. The four-year college students who transfer to two-year colleges had a record of greater initial academic difficulty and lower aptitude than their classmates, but come from middle and upper middle-class families.

Anderson (135) and Levin et al. (173) present evidence which suggests that two-year college students have lower level educational outcomes, and that these students have a higher probability of dropping out compared to four-year college students. Peng and Fetters (194) report that by fall 1974, two years after matriculation, about one out of every three four-year college entrants and three out of every five two-year college entrants had left college. Based upon multiple regression analysis, the most important predictors for persistence by four-year college students were found to be: college grades, rank in high school class, high school curriculum, educational aspirations and employment, race, and social class background, in that order (note the absence of sex). For two-year college entrants, a somewhat different order and set of variables were involved. In rank order of importance were: college grades, sex, rank in high school class, high school curriculum, social class, and educational aspirations.

There was no net sex difference in withdrawal rates among four-year college entrants. However, among students in academic programs who originally matriculated at a two-year junior or community college, men were substantially more likely than women to be still pursuing a degree in the third year of the study. In contrast, there was no net race difference in withdrawal behavior among two-year college students; however, among four-year college entrants, blacks were substantially more likely than whites to be still enrolled in college, when other background variables are controlled.

Peng and Fetters' finding that the influence of college grades was a strong predictor of retention or withdrawal from college was supported in a more recent study. Wolfe's (222) investigation of the factor's impinging on the liklihood of college withdrawal also demonstrated the importance of grades, regardless of race. Thomas (212) found that college grade performance was a primary predictor of prompt graduation, especially for males. The impact was found to be somewhat stronger for blacks than for whites.

The question of whether transferring, stopping out, or delaying entry has a negative effect on the NLS respondents' educational performance has not yet been adequately studied. One study that did address this question (Robertshaw and Wolfe 201) found that delaying entry into a postsecondary educational institution or interrupting attendance, does in fact handicap students as opposed to those students who neither delay nor interrupt.

The third follow-up data provide information about the NLS respondents four and one-half years after high school, a sufficient period of time in which to find some of the class of 1972 enrolled in graduate and professional school. Twenty-one percent of the students who graduated from college four years after high school were enrolled in graduate or professional school as of October 1976. Rates of attendance did not differ particularly by race, but sex differences were apparent. Although women were more likely to graduate from college on schedule, men were more likely to enter graduate school for advanced degrees. The male-dominated areas of professional study are law, medicine, dentistry, and theology, whereas education, health services, the humanities and fine arts were the areas of advanced study dominated by NLS women (Eckland & Wisenbaker 10, Eckland & Henderson 156).

4. Labor Force Participation

Fewer studies have been conducted on the labor force participation of the NLS respondents. Some work has been done on sex and race wage differentials and early labor force participation and will be summarized here.

Eckland & Wisenbaker (10) report that 72 percent of the class of 1972 were working for pay as of October 1976 and 9 percent were looking for work. Of the college graduates who were not still in school as of October 1976, three out of four were employed full-time. Between 1974 and 1976, a marked increase (from 10 to 23 percent) in the number of professional-managerial jobs held by the sample occurred, reflecting the entry of college graduates into full-time, higher status jobs. There were more white men than white women employed in these high-status jobs in 1974 (12 versus 9 percent, respectively). But, by October 1976, the differential had disappeared. Over the two years, the percentage of individuals in professional-managerial jobs had doubled among white men but had nearly tripled among white women. Differences between blacks and whites appear to be more pronounced in 1976 than they were in 1974, with blacks substantially underrepresented in the professional-managerial category and overrepresented in occupations such as service workers, operatives, farmers, and laborers. The situation for Hispanics is not the same as for blacks; the occupational distributions of the Hispanic and white males were almost identical in 1976. Hispanic women, however, are underrepresented among professionals and overrepresented in clerical and sales work compared to other women.

Turning to the studies using the NLS data that have investigated wage differentials, some interesting results have been reported. Lazear (38) reports that there was a substantial narrowing of the male-female wage differential in the six-year period between 1968 and 1974, a conclusion supported in the current literature. However, Lazear's (37) analysis of the black-white wage differentials of young people found that although previous research had claimed that there had been a narrowing of the black-white wage differential, much of the narrowing may be due to a wage measurement problem. While the actual wage differences may have become less pronounced for blacks and whites, it appears that much of what employers have given nonwhites in current wages has been recaptured by a reduction in on-the-job training provided to blacks.

The issue of the effect of discrimination on minority youth employment was studied by Hill (34). Findings indicate that the persistent high unemployment among minority youth is not primarily due to educational and skill deficiencies, since job opportunities are greater for white youth with lower educational attainment. White high school dropouts have lower unemployment rates (16.7 percent) than black youth with some college education (21.4 percent) and about the same jobless rates (16.5 percent) as black college graduates.

An extensive study conducted by Black (27) investigated the employment obstacles encountered by recent noncollege bound high school graduates. The research focuses on the process that deals with the mechanism whereby young workers and employers are brought together via the job search and migration decisions of new labor force entrants. In particular, three related aspects of the mechanism by which recent high school graduates achieved success in the labor market were examined: (1) the determinants of geographic mobility; (2) the impact of migration on the probability of employment and wage growth and (3) what search methods are used to find jobs, their respective job-finding effectiveness, and their respective impacts on wage growth. Regarding geographic mobility, results indicate: (1) little race-sex differences in patterns of mobility; (2) NLS respondents exhibited a pronounced degree of responsiveness to labor market signals; (3) the historical migration away from rural areas was not taking place during the 1972-76 period under investigation; and (4) there are significant differences between single and married respondents in that for males, marriage inhibits mobility, while for females, the opposite is found. In terms of the impact of migration on wage growth, among those who were employed, migration results in a slight increase in the probability of employment and wage increase, whereas among the jobless, migration has a large positive effect on subsequent employment. The final aspect of the research that examined job search behavior found that the respondents rely heavily on informal search methods to look for and obtain employment. In particular, direct application to firms, and use of friends and relatives are cited most frequently by all race/sex groups in the sample.

Another study (Griffin et al. 32) that involved non-college educated workers investigated the early career attainments of that sample, considered from a dual labor market perspective. The dual labor market theory, in general, states that there are two distinct sectors (primary and secondary) with little mobility between them and that the important distinction for analyzing the economy is that between "good" jobs and "bad" jobs rather than between skilled and unskilled workers. The secondary sector operates according to processes that prevent workers from leaving this sector not so much by their own lack of human capital as by institutional constraints and lack of "good" jobs. Results of this study indicate that, indeed, NLS respondents working in the primary sector obtain greater earnings and career advancement than those working in the secondary market. In contrast to the theory, the authors found considerable inter-sectoral mobility, few differences in the kinds of workers employed in the two sectors, and quite similar within-sector achievement processes during the first years of employment. The authors note that the results of the study revealed little about why particular people are more prone than others to suffer unemployment and call for further research of the problem.

5. Personal, Career, and Psychological Development

The NLS included a number of scales on important personality traits, with repeated measures over time. In reaction to new experiences and role demands as adolescents move from high school to college or into marriage or the labor force, a variety of attitudinal and personality changes can be anticipated. Five studies have been completed that focus on such changes.

a. Self-esteem and locus of control

Reflecting the kind of data available in the NLS, most attention has been given to two personality attributes—self-esteem and locus of control. The scales measuring these attributes each consisted of four items, the former a modification of Rosenberg's self-esteem scale and the latter a short form of Rotter's locus-of-control scale.

Gruber (127), and Conger, Peng, Dunteman (124) examined a number of correlates of self-esteem and locus of control in the base year survey. Some of the main findings were (a) although men and women did not differ significantly in self-esteem, women had stronger feelings of internal control of their environment than men; (b) whereas blacks were higher than whites in self-esteem, they were lower in locus of control, meaning that blacks were inclined to place the determination of their behavior on external events outside their control, and (c) married students increased their self-esteem significantly more than did single students during their academic careers, with concommitant (but nonsignificant) changes in internal locus of control. Of the various predictors considered in the models, the strongest correlate of locus of control for all race and sex groups was ability, while the strongest predictor of self-esteem was high school class rank for whites and academic ability for blacks.

One of the more interesting findings was that the association between these two measures, i.e., locus of control and self-esteem, was positive for whites but negative for blacks. This finding, together with those mentioned above, suggest that blacks are apparently able to cushion the expected depressant effects of generally low ability and poor performance in school by placing the blame for their lack of success on conditions outside their own control, which is one reason for their capacity to maintain a high level of self-esteem and, as noted elsewhere, high educational aspirations, despite these handicaps.

A year after leaving high school, both blacks and whites, on the average, experienced an increase in feelings of internal personal control, although blacks increased less on the scale than whites, thereby widening the earlier race difference in locus of control. Similarly, there was a large increase in self-esteem among whites after high school which was not matched by blacks. The effect was to completely wash out the earlier race difference in self-esteem favoring blacks. The smaller increase among blacks apparently was due to the proportionately larger number of blacks than whites with low ability and who did not go to college, both of which tended to depress self-esteem in the year after high school (Gruber 127).

Controlling for initial self-esteem in 1972, Gruber found that ability continued to affect both self-esteem and locus of control a year later, particularly among blacks. The direct effect of academic ability on self-esteem among blacks, in fact, was now stronger than it was in high school. The change in self-esteem from high to low among blacks was largely restricted to the lowest ability groups who, upon leaving high school, were forced to face the prospects of marginal employment and limited educational opportunities. Blacks who got into college, on the other hand, maintained a high level of self-esteem and developed a stronger sense of personal control, which suggests a shift from blaming the system to an assumption of personal responsibility.

Other group comparisons also showed some interesting changes in self-esteem and locus of control as a function of prior experiences. For example, Conger, Peng & Dunteman (124) found that men who had entered the military service increased in self-esteem. In contrast, the NLS graduates who were "looking for work" in October 1973 were relatively low on self-esteem and external locus of control in high school and were even lower on these scales a year later, presumably in reaction to the frustration of being unemployed.

b. Life goals

In addition to the above psychological measures, the Conger, Peng & Dunteman (124) study examined group profiles and patterns of change on three scales of life goals relating to work, community, and family. Other studies (Peng and Talbert, 134; Briggs, 121; and Alexander and Cook, 119) have elaborated on the issues of occupation goals and educational aspirations.

Conger, et al., reported that, as expected, men were somewhat more work-oriented in their post-high-school aspirations than women in the base year survey. Similar differences occurred among academic ability and ethnic groups, with lower academic ability respondents and blacks and Hispanics more work-oriented than other respondents. With regard to community and family orientations, blacks were the most community-oriented and whites the least, while Hispanics were the most family-oriented.

Although the subgroup orderings and differences on these scales remained relatively unchanged between the base year and the first follow-up, the scales nevertheless were quite responsive in some situations to changes in social roles after high school. For example, women who became homemakers rated work as extremely unimportant compared to other subgroups, while men in the military had very low ratings on family orientations.

Peng and Talbert report that life goals are related to the choice of male-dominated fields. Women who choose traditionally female fields place a greater value on happy marriage, family life, and strong friendship than do women who choose traditionally male-dominated fields.

In studying the association of adolescent's occupational values and father's occupational prestige and education, Briggs reported that parents do not pass on their own occupational values to their children, and labor force participation seems to be the major determinant of occupational values.

Alexander and Cook employing the NLS data with that of the Study of Academic Prediction and Growth, questioned the conventional interpretation of educational plans as motives, and thereby as determinants of educational attainment. They report that when questioned about their educational plans perhaps as many as 20 percent of youth supply extemporaneous responses; another 20 percent report goals of quite recent formulation, and the remainder report long-term commitments (at least two to five years). The last are so longstanding as to make suspect the causal ordering employed in most models of adolescent attainment. That is, such plans are not properly considered as the products of high school experiences as they are in many causal models of the attainment process.

6. Methodological Studies

Some of the methodological reports are RTI documents relating to instrument development, field testing of the instruments, and associated data collection procedures for the base year and four follow-up field tests. Other RTI documents describe the sampling, data collection, and data file construction activities for each of the four follow-up surveys. These routine methodological reports are not discussed here but can be found in the annotated bibliography. (See Chapter IV.) The studies highlighted have been grouped into the following categories: (a) nonresponse bias; (b) measurement properties, (c) sampling, (d) creation of special working files, and (e) analysis strategies.

a. Nonresponse bias

The NLS data are useful in studying response bias in relation to individual characteristics and experience. Peng, Bailey & Dunteman (94) compared high school self-reported dropouts and simulated dropouts (i.e., students with low SES and academic ability) with graduates on their participation rates, efforts required for data collection, and the overall quality of their response in a longitudinal survey. It was found that dropouts were less likely to return mail questionnaires, had lower sample retention rates, needed more effort to trace their residences and to complete editing checks, and generally provided data of lower quality. It was also found that no substantial differences in data quality, as measured by completion and consistency indices existed between those dropouts and graduates who were interviewed. These findings suggest that the interview approach with dropouts is preferable as far as data quality is concerned. A combination of mail survey, extensive editing phone calls, and interviews would also be advisable. In either case, questionnaires should be simple and straightforward in order to reduce nonresponse bias. A complicated and lengthy questionnaire would probably discourage dropouts from completing the questionnaire. Since dropouts were characterized by low academic ability and low socioeconomic status, the above findings and recommendations are applicable to individuals with those characteristics.

Cox and Folsom (56) examined two methods to adjust for nonresponse bias: the hot deck and weighting class adjustment techniques. Both techniques reduced bias but increased the variance so that only marginal gains in precision were found. However, the authors feel that complex statistical analyses and data losses characteristic of longitudinal study efforts might necessitate the use of nonresponse adjustment techniques.

Peng (93) explored the feasibility of imputing aptitude scores through regression for about 7,000 respondents who did not have aptitude scores. The multiple correlations were too low for effective prediction and, consequently, imputation was not recommended.

b. Measurement properties

Two topical areas in measurement were investigated using the NLS data: test bias and reliability of survey measures. Breland et al. (48) studied over 14,000 high school seniors from the base-year survey with respect to sociocultural differences in responses to cognitive items from six different cognitive tests: vocabulary, picture-number, reading, letter-groups, mathematics, and mosaic comparisons. Ten different groups were analyzed: American Indians, blacks, Mexican-Americans, Puerto Ricans, other Latin Americans, Oriental Americans, white Northeastern, white North Central, white Southern, and white Western. Proportions of each group responding correctly to each item of each test were computed and then transformed to an interval scale of delta values (i.e., standard scores with a mean of 13 and standard deviation of 4). The delta values for the white North Central group were then cross-plotted with each of the other groups to yield an elliptical pattern of points for each comparison. The study found that the greatest instabilities were noted among the vocabulary items. These vocabulary instabilities appeared to be attributable to linguistic differences, primarily those existing between Spanish-speaking groups and other groups. Vocabulary items involving cognates were easier for the higher socioeconomic status Spanish-speaking groups than for the white North Central group. It was also observed that reading test items having material relevant to black culture were relatively easier for blacks than were other items in the test battery. The study also found that mathematical knowledge obtainable from everyday life situations, such as how to count money, was not more difficult for minority groups than for the majority group. In contrast, very simple mathematics problems, such as determining the value of square roots of whole numbers less than ten, seemed extraordinarily difficult for minority groups.

Ironson and Subkoviak (71) also investigated the test item bias for the six NLS subtests. They used four methods for determining item bias and concluded that there appeared to be item bias. However, the main purpose of the research was to determine the agreement among the four methods of determining item bias. The correlations among the four methods were low to moderate and they, themselves, had low correlations with an external measure of bias. The authors concluded that the low correlation made it difficult to offer specific recommendations in regard to which bias methods to employ, although they make some tentative recommendations.

Another measurement problem examined using the NLS data is the reliability of measures acquired by mail and interview surveys. No single conclusion can be drawn from all measures because of the vast differences in reliability associated with item characteristics. As Conger, Conger & Riccobono (55) found, factually oriented items are more reliable than subjectively oriented items, and response categories with an ambiguous referent (i.e., "other") are generally unreliable. Lyons & Moore (84) have similar findings. In addition, individuals' responses regarding parental income and spouse's income are generally unreliable. Student characteristics are strongly related to reliability of survey responses. In general, low ability respondents are less reliable than middle or high ability respondents; middle SES respondents are less reliable than low or high SES respondents; and women are more reliable than men on nonquantitative items. Tabler and Schmidt (107) found significant differences in ability, socioeconomic status, and race among early and late respondents. Furthermore, the quality of the data was higher for early respondents as contrasted with late respondents and interview data were of higher quality than mail questionnaire data. These findings should be useful in designing similar surveys in the future.

Blaschke, Haggstrom & Morrison (47) devised procedures for estimating parenthood and marital status for NLS respondents for October in 1973, 1974, and 1976. Specific variables on the NLS files to measure these states are problematic; the data are often ambiguous, inconsistent, or missing. The procedures reduce both missing values and inconsistent responses in the original NLS data base. A FORTRAN program is presented so that other researchers can create these variables. This program should prove useful for those researchers interested in modeling the family formation process.

Shah et al. (101) devised an unbiased quality control procedure for estimating the error rate for keying the NLS Second Follow-up data. The procedure involved rekeying a three percent sample of the original data two times. The triplicate data record was then used to estimate the error rate, which was found to be less than .25 percent on the average.

Carroll (49) discussed problems of measuring financial variables associated with postsecondary education for the NLS and other surveys. Problems particular to the NLS involved high rates of inconsistency, nonresponse, and response set bias.

c. Sampling

The sample design efficiency of the NLS (89) was investigated by employing a cost modeling approach. The efficiency of the current design was compared with other two-stage sample designs of equal cost and it was found that the current design was perhaps optimal across all statistics. Another sample design efficiency study (87) investigated the effects of stratification, clustering, and unequal weighting on the variances of NLS statistics. The results indicated that the increase in variance due to cluster sampling was only partly offset by the reduction due to stratification. Region was the strongest stratification variable while type of control was the weakest. Unequal weighting contributed substantially to increased variances.

Williams (112) showed that naive sampling error estimates will seriously underestimate sampling errors. Fortunately, a simple multiplicative adjustment to the simple random sampling error will adequately estimate the actual sampling error of NLS statistics. The report also includes approximate standard error tables and actual standard errors for a number of third follow-up statistics.

d. Creation of special working files

Selby (98) created a work-file tape drawn from an edited version of the NLS Second Follow-Up Master File. Selected data from sources external to the NLS master file were added to the work file. The work file contains 12,709 cases who were not enrolled in school in October 1974. Included in this file are data on work and work related variables as well as general background variables for each case. The referenced document describes the structure and content of the file.

Another work file was created by Tenison (109). This file was comprised of NLS students attending postsecondary institutions. Data external to the NLS were obtained on the characteristics of institutions that students attended and were linked to the individual student's record. The referenced document describes the structure and content of six linked files.

e. Analysis strategies

Dunteman & Peng (58) discussed a number of analytic strategies for capitalizing on the longitudinal nature of the NLS data base. Specific applications of log linear modeling and path analysis to a number of substantive problems were illustrated using NLS data. Emphasis was placed upon the correct specification of a model to explain behavior over time.

Wolfle (114) illustrated the estimation of the parameters of structural equation models with measurement error on NLS data. The results were compared with ordinary least squares solutions to indicate the serious biases that are encountered when measurement errors are ignored.

Shah, Holt, & Folsom (102) investigated the implications of applying ordinary least squares (OLS) to estimate some regression models from the NLS. Through the use of simulation the performance of OLS was compared with the performance of a more appropriate estimation scheme (Horvitz-Thompson estimator and Taylorized deviation (HTT)). The simulation results indicated that HTT performed extremely well in a wide variety of situations. Errors in inference using HTT are generally conservative. The OLS approach generally yielded nonconservative results. In some instances, however, OLS performs quite well, but it cannot be expected to perform well in general. The authors recommended the HTT estimator because it is theoretically superior to OLS and is consistently more conservative.

C. Discussion and Recommendations for Future Analyses

Most of the NLS studies summarized in this report deal with data from the base-year and first two follow-up surveys. Relatively few studies have been published using the data from the third follow-up which was conducted in 1976-77 and released in 1978, although many are in progress. None have yet been published from the fourth follow-up of 1979-80 since, as of this writing, the public users tapes had just been released. Some, but certainly not all, of the work currently in progress is listed in Section IV D.

The preceding review has been selective and not exhaustive of the nearly 300 reports now available. We strongly recommend that readers with special interests in the NLS data review the annotated bibliography of the reports that follow in the next section. The studies completed to date or in progress not surprisingly have only tapped the surface of the NLS potential. There are at least five areas where more data analysis, we believe, should be done.

One of these is making better use of extant data from the earlier follow-ups, particularly in the areas of nonacademic postsecondary education and institutional sources of variation in outcomes. Few studies, thus far, have dealt with short-term vocational programs in which somewhere between 10 and 20 percent of the students enroll within a few years after leaving high school. Very little is known about who these students are, the types of programs in which they enroll, or the benefits. A similar statement, at least in some respects, can be made about those enrolled in academic programs leading to a Bachelor's degree. While a great deal is known about who went to college and who dropped out or transferred, very little work has been done on the effects of the institutional contexts in which students were enrolled. Colleges certainly differ markedly from one another not just in terms of the type of students they admit but in the climates they foster for learning. Except for the distinction between two-year and four-year institutions, few NLS reports are yet available on the effects of where one goes to college.

A second general area in which work on the NLS is needed is on the long-term process of obtaining the academic credentials that so many students persistently pursue, both Bachelor's and postgraduate degrees. As reported earlier, just as many students were still pursuing undergraduate degrees in 1976 as had graduated. Many of the persisters were delayed entrants, however others had changed majors and were taking longer than expected while others had dropped out for a period of time and had returned. The third and fourth follow-ups should be useful in learning more about the progress of these students but also those who graduated on schedule in 1976 and went on for further studies in graduate or professional school. Although, as of 1979, a majority of those entering graduate school probably will not have had enough time to obtain an advanced degree, sufficient time will have passed to at least say a great deal about who goes.

A third area of needed study is the relationship between education and other areas of activity in the life of young adults, particularly jobs, marriage, and fertility. Some issues of this type already have been examined. It already is apparent that the occupational goals that most students had before leaving high school were never fulfilled, but little is known about why or how such goals were changed either in or outside of college. Moreover, to our knowledge, almost nothing has been done on the presumed occupational or economic advantages of obtaining either a two-year and four-year degree. Most of the writing in this area thus far has dealt only with those who did not go to college. The NLS not only offers an excellent opportunity to study the occupational status of former college students but the causes and consequences of marriage and childrearing. Although the timing of these events is known from other surveys to be strongly related to both the educational and vocational careers of young people, few NLS studies so far have been done on the topic.

A fourth area of study that should be encouraged is intercohort analysis. Many of the critical variables in the design of the NLS are identical in construction or close enough to being so to make direct comparisons to the 1960 high school cohorts in Project TALENT, a massive longitudinal national survey undertaken by the U.S. Office of Education over two decades ago. Only two studies reviewed in this report have taken advantage of the TALENT and NLS data for comparative purposes, and much more could be done. Readers also should be aware of the fact that the National Center for Education Statistics study of the senior class of 1980, called High School and Beyond, is a replication of the class of 1972, with follow-ups scheduled every other year. Although the 1980 base-year data are now available, to our knowledge, no intercohort studies have been undertaken as yet.

Lastly, problems of data collection and analysis associated with the NLS should not be overlooked nor should it be assumed that they will have been resolved. As verified and briefly reviewed in this report, numerous methodological issues have been raised about nonresponse bias, measurement error, and sampling design. Fortunately, most of the problems are not too serious, but some are and data users need to be better informed than what we believe them to be. Moreover, the work in this area is continuing as new problems arise. Just to give one example, all four self-esteem items in the 1972 base-year and first three follow-ups were scaled in one direction (positive) while the four locus-of-control items were scaled in the opposite direction (negative). Thus, if respondents tended to "yea-say," it could create a situation in which those who scored high on self-esteem would score low on locus-of-control. The situation was not corrected until the fourth follow-up, however most data users will not be aware of the change until they see the new tapes. Nevertheless, some of the studies that already have made use of these instruments, and that we reported earlier, could be in error. Data users need to be kept informed.

IV. Annotated Bibliography

A. Annotations

General Description

1

Bailey, J. P., Jr. *The national longitudinal study of the high school class of 1972.* Paper presented at the meeting of the North Carolina Association for Research in Education, Winston-Salem, North Carolina, May 1976.

This paper briefly summarizes the NLS data collection activities, follow-up questionnaires, and some selected findings from the second follow-up data which include fall 1974 activities, persistence in postsecondary education, participation in jobs, family and community life, quality of life, and life goals.

Classification: General description (summary of survey data)

2

Center for Educational Research and Evaluation. *National longitudinal study of the high school class of 1972: A summary of the merged findings from analyses by RTI of the first follow-up and preceding data* (working summary). Research Triangle Park, North Carolina: Research Triangle Institute, September 1975.

For those not familiar with NLS, the summary provides a useful overview. The first section describes the base-year survey and subsequent waves and the NLS goals and purposes. The second section summarizes findings from data analyses of the first follow-up and base year completed prior to September 1975.

Classification: General description (summary of survey data)

3

Collins, E. F. *The design and intent of the national longitudinal study.* Paper presented at the annual meeting of the American Statistical Association, San Diego, California, August 17, 1978.

This paper provides a complete description of the NLS in terms of the origins of the project, its government agency context, goals and objectives, uses of the data, and the study design and implementation. The author notes that the NLS is unique in its (1) individual orientation (rather than institutional), (2) longitudinal nature, (3) national score, (4) low sample attrition rate, (5) inclusion of high school graduates who did not attend college, (6) focus on broad rather than transient issues, and (7) over-representation in the sample of disadvantaged persons.

Classification: General description

4

Davis, J. A. *The U.S. national longitudinal study: An unprecedented data set for exploration.* Paper presented at the annual meeting of the Sociedad Interamericana de Psicologia, Lima, Peru, July 1979.

This paper, available in Spanish and English, describes the data resource provided by the NLS spanning the Base-Year through the 1980 Fourth Follow-Up, which includes some 3,000 items of information on each of over 20,000 sample members.

The purpose of this paper is to provide a brief description of the following:

(1) the scientific and political forces prompting the effort,
(2) the study's technical procedures and substantive content, and
(3) the study's potential social and scientific significance.

Classification: General description

5

Davis, J. A., & Levinsohn, J. R. The NLS study of the high school class of 1972: A resource for educational and human development researchers. Mulholland, J. E. (Ed.), *New Directions for Testing and Measurement: Insights from Large Scale Surveys.* San Francisco, California: Jossey-Bass, 1979.

The purpose of this book is to provide a succinct but thorough description of the current status of four important large-scale government projects.

The chapter which describes NLS activity, does not attempt to inventory the substantive findings from the hundreds of separate studies thus far, but guides researchers interested in its use, or policy makers concerned with potential consequences of this major and general purpose educational research investment.

Classification: General description (summary of survey data)

6

Dunteman, G. H., & Bailey, J. P., Jr. *The* *national longitudinal study: Design and preliminary results.* Paper presented at the annual meeting of the American Association for the Advancement of Science, New York, N. Y., January 1975.

The authors summarize briefly an overview of NLS—from inception, through preliminary analyses, to future plans. Topics include a background of the study and descriptions of the instruments, data collection procedures, data processing, important variable classes, and classification variables. Also discussed briefly are three sets of selected preliminary findings based upon simple unweighted tabulations available at that time: (1) fall 1973 status; (2) spring 1972 plans versus October 1972 activities; and (3) October 1972 activities versus October 1973 activities. The final section of the paper discusses implications and future plans using a simple path analysis model involving financial aid as an example of how the impact of a factor in the activities of the 1972 high school seniors can be evaluated.

Classification: General description (summary of survey data)

7

Dunteman, G. H., & Peng, S. S. *The national longitudinal study of the high school class of 1972: An executive summary of the first follow-up analyses* (NCES Contract No. OEC-0-73-666). Research Triangle Park, North Carolina: Research Triangle Institute, September 1975.

There were 21,350 sample members who completed a First Follow-Up Questionnaire; 69% by mail, 31% by personal interview. This executive summary highlights the major findings from the first follow-up analytical analyses.

Most of these findings are descriptive in nature and are to be considered exploratory rather than explanatory. Causal inferences are not suggested.

Classification: General description (summary of survey data)

8

Eckland, B. K., & Alexander, K. L. The national longitudinal study of the high school senior class of 1972. Prepared for *Longitudinal Perspectives on Educational Attainment,* C. Kerckhoff, (Ed.) Greenwich, Connecticut: JAI Press, Inc., 1980.

In their contribution to Kerckhoff's book, the authors describe the background and methods of the NLS, and review the results of numerous studies pertaining to educational attainment of NLS sample members. Most studies selected for discussion deal with college access and patterns of school continuation, rather than with predictions of eventual educational attainment. Results of more than 30 studies are presented, divided into three categories: equality of school resources and achievement; access to college; and college performance, graduation, and beyond. A complete list of references is provided.

In closing, the authors suggest that studies thus far have only tapped the surface of NLS potential and propose several suggestions for future research. They note that only after the fourth follow-up is completed (1980)—more than seven years beyond high school graduation—will truly definitive findings based upon the NLS be feasible.

Classification: General description; postsecondary education

9 ED 139 826

Eckland, B. K., & Bailey, J. P., Jr. *National longitudinal study of the high school class of 1972: A capsule description of the second follow-up survey data.* Research Triangle Park, North Carolina: Research Triangle Institute, July 1976.

This report is designed to present basic descriptive results of the NLS second follow-up data. The purpose is to give summary information about education, work, and family and community activities of sample members since leaving high school. There is a concentration on persistence in education and participation in jobs because, among the many other issues which could be addressed with the NLS data, these seem to have the most pervasive, important, and meaningful impact on the lives of young adults. The family and community life focus rounds out this descriptive summary of these young adults as they move into the American mainstream.

Classification: General description (summary of survey data)

10

Eckland, B. K., & Wisenbaker, J. M. *National longitudinal study: A capsule description of young adults four and one-half years after high school.* Research Triangle Park, North Carolina: Research Triangle Institute, February 1979.

This report, taken from the analysis of responses, is a summary of descriptive information about the education, work, family, and community activities of these young adults since leaving high school. Many details are not included because its purpose is to highlight some of the preliminary findings.

The information presented in this capsule report

is based mainly on the third follow-up, and thus generally refers to the October 1976 data. However, some statistics have been analyzed in relation to the previous follow-up data and thereby make use of the longitudinal nature of the survey. Major areas covered were postsecondary education, graduate and professional schools, employment, marriage and family, and other experiences and opinions.
Classification: General description (summary of survey data)

11 ED 091 810
Fetters, W. B. *A capsule description of high school seniors—base-year survey* (DHEW-OE 74-11116). Washington, D.C.: U.S. Government Printing Office, 1974.

Part I of this two-part report describes the planning and development of the NLS. Part II presents a brief description of the characteristics, plans, and attitudes of the students as they are about to leave high school.
Classification: General description (summary of survey data)

12 ED 120 202
Fetters, W. B. *Comparative profiles one and one-half years after graduation* (NCES 76-220). Washington, D.C.: U.S. Government Printing Office, 1975.

This report presents tables summarizing some of the first follow-up survey data. Statistics are presented for the total group, and for the two sexes. Tables are also presented by racial-ethnic group, academic ability, SES, high school program, and region.
Classification: General description (summary of survey data)

13 ED 111 850
Fetters, W. B. *Student questionnaire and test results by sex, high school program, ethnic category, and father's education* (NCES 75-208). Washington, D.C.: U.S. Government Printing Office, 1975.

This report describes group differences in the high school experiences, attitudes, opinions, and plans of the class of 1972 seniors. The groups were formed by one-way classifications of sex, high school program, ethnic membership, and father's education.
Classification: General description, secondary education

14
Fetters, W. B. *Student questionnaire and test results by academic ability socioeconomic status, and region* (NCES 76-235). Washington, D.C.: U.S. Government Printing Office, 1976.

Student questionnaire and test data from the base-year survey are summarized in this report for the total population and for groups classified by academic ability, socioeconomic status, and region of the country in which the high school is located.
Classification: General description (summary of survey data)

15
Gilford, D. M., Chair. Symposium: *The national longitudinal study of the high school class of 1972.* Papers presented at the annual meeting of the American Educational Research Association, Washington, D.C. March-April 1975.

This document is a collection of papers presented at the 1976 annual meeting of the American Educational Research Association in Washington, D.C. It includes the following:

(1) Objectives, Design, and History of the National Longitudinal Study. Davis & Collins, ED 151 388;
(2) Philosophy of the Design and Development of the Questionnaire. Tabler, Berls & Cornelson;
(3) The National Longitudinal Study of the High School Class of 1972: First Follow-Up Survey Procedures to Maximize Participation. Collins & Bailey;
(4) The National Longitudinal Study of the High School Class of 1972: Selected Results from the Base-Year and the First Follow-Up Surveys. Peng, Dunteman, & Fetters, ED 151 393;
(5) The National Longitudinal Study of the High School Class of 1972: A Description of the Merged Base-Year/First Follow-Up Data File. Levinsohn & Riccobono, ED 151 392;
(6) The Vocational Reevaluation of the National Longitudinal Study of the High School Class of 1972: Base-Year. Fleming, Maroney & Straser, ED 151 391.

Classification: General description

16
Grant, W. V., & Lind, C. G. *Digest of education statistics 1976 edition.* Washington, D.C.: U.S. Government Printing Office, 1977.

The 1976 edition of the *Digest of Education Statistics* is the 15th in a series of annual publications. Its primary purpose is to provide an abstract of statistical information covering American education from pre-kindergarten through graduate school.

It utilizes materials from numerous sources, including the statistical surveys and estimates of the NCES and other appropriate sources both governmental and nongovernmental.

Chaper III entitled College and University Education contains data obtained from the NLS, e.g., Table 131: Percent of full-time freshmen receiving financial aid, by source of funds and by selected characteristics of students: United States, 1972-73; and Table 91: Percent of the high school senior class of 1972 participating in postsecondary education by race, ability, level, and socioeconomic status: United States, fall 1972, fall 1973, and fall 1974.
Classification: General description

17
Hilton, T. L., & Glaser, E. *Selected results and description of data file.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, February 1973.

This paper, presented as part of the symposium on the National Longitudinal Study, describes the data file and highlights results from the base year.
Classification: General description (summary of survey data)

18
National Center for Education Statistics. Immediate education plans of high school seniors, class of 1972. *Advance Statistics for Management Bulletin* (Number 17). Washington, D.C.: National Center for Education Statistics, March 1974.

This bulletin reports that (1) 59 percent of high school seniors plan to continue their education as their major activity the year after high school; (2) of those in academic programs, 84 percent plan to continue education; in vocational-technical curricula, only 33 percent; (3) the proportion for black students (56 percent) is a little less than for white students (60 percent); for males (59 percent), a little less for females (61 percent).
Classification: General description (summary of survey data)

19 ED 110 730
National Center for Education Statistics. One and one-half years after high school graduation: The class of 1972. *Advance Statistics for Management Bulletin* (Number 21). Washington, D.C.: National Center for Education Statistics, June 1975.

This bulletin presents selected results of the first follow-up survey of the National Longitudinal Study of the High School Class of 1972. It describes these young adults approximately one and one-half years after high school graduation. Statistics descriptive of the population as a whole are often followed by figures applying to given subgroups classified by high school program, race, ability, socioeconomic status (SES), or sex.
Classification: General description (summary of survey data)

20 ED 120 251
Peng, S. S. National longitudinal study of the high school class of 1972: *A capsule description of first follow-up survey data* (NCES 76-216). Washington, D.C.: U.S. Government Printing Office, 1976.

This report is designed to present basic descriptive analyses of the NLS data. Its purpose is to give summary information about the young adults' activity status, marriage and family planning, mobility, aspirations and plans, postsecondary educational experience, work experience, and relevancy of high school job training and counseling service. Data are summarized for major subgroups defined by sex, race, ability, socioeconomic status, high school program, and region. The last pages present highlights abstracted from the report.
Classification: General description (summary of survey data)

21
Peng, S. S., & Holt, M. M. *National longitudinal study: Tabular summary of the second follow-up questionnaire data two and one-half years after high school,* Volumes I and II. Research Triangle Institute: Research Trangle Park, North Carolina, August 1977.

This report contains tabular summaries of the numerical responses to the Second Follow-Up (SFU) Questionnaire items of 20,872 individuals. These items deal primarily with the survey participants' educational experiences and occupational attainments in October 1974, along with their continuing or revised plans about education, training, and jobs as well as measures of their aspirations, attitudes and opinions.

The weighted percentage distributions of the response codes to items in the SFU are presented. Percentages were based on those sample members who gave valid responses. All invalid responses (e.g., missing, refusal) were excluded from the computation and are not presented.

Along with a weighted percentage distribution of responses for the population as a whole, there are weighted percentages for the subpopulations defined by the following variables: sex, race, academic ability, SES, high school program, region, sex by race, and cross-classification of sex and race—each by academic ability, SES, high school program, and region.

Frequency distributions for the SFU are presented in Volume II.

Classification: General description

22

Peng, S. S., Wisenbaker, J. M., Bailey, S. S., & Marnell, D. *Tabular summary of the third follow-up questionnaire data* (Volume I). Research Triangle Park, North Carolina: Research Triangle Institute, February 1978.

This report contains tabular summaries of the numerical responses to the Third Follow-Up Questionnaire items of 20,092 individuals. These items deal primarily with the survey participants' educational experiences and occupational attainments in October 1975 and 1976 along with their continuing or revised plans about education, training, and jobs as well as measures of their aspirations, attitudes, and opinions.

The panel of repeated observations permits the examination of the relationships between schooling, work, and other experiences to subsequent career choices along with the educational and labor force participation of each of the selected individuals. Such information and the resultant analyses are important to those engaged in formulating legislative proposals and educational policy.

Classification: General description

23

Riccobono, J. A., Henderson, L. B., & Levinsohn, J. R. *The NLS data base: From base year 1972 to fourth follow-up 1980.* Paper presented at the NCARE annual conference, Wake Forest University, Winston-Salem, North Carolina, November 1980.

This paper briefly describes the National Longitudinal Study of the High School Class of 1972 through fourth follow-up including content areas which make the instruments useful for researchers, policymakers and planners.

Areas of NLS investigation are also outlined and the public release data file described.

Classification: General description

24

Selby, D. *Comments on possible policy research uses of four major longitudinal data bases.* Washington, D.C.: Joseph Froomkin, Inc., March 1977.

This report was prepared in response to a request for comments on three major longitudinal surveys covering the postsecondary education and work experience of youths. It summarizes some features of these surveys which affect their potential use as alternatives for or complements to the National Longitudinal Study of the High School Class of 1972. The three alternative surveys considered are the National Longitudinal Survey of Labor Market Experience, Project TALENT, and the Panel Study of Income Dynamics.

The report focuses on those features of the surveys which bear on policy-oriented research concerning the progress of youths in the years following completion of high school. Each of the three "alternate" surveys is compared with the National Longitudinal Survey (High School) and with the other alternates.

After review of the contents, methods, and technical success of each of these surveys, the author ranks them, according to overall policy potential, as follows:

1. National Longitudinal Surveys of Labor Market Experience (male and female youth cohorts)—a very good general data source, though aging.
2. National Longitudinal Study of the High School Class of 1972—a good data source for some uses, with high but as yet unrealized potential and some important technical flaws.
3. Project TALENT—a large volume of relevant data, but obsolescent and technically flawed, hence, probably no more than a fair data source.
4. A Panel Study of Income Dynamics—careful technical under-pinnings, but very sparse data on the relevant cohort(s) and some doubts about sample representativeness lead the authors to judge it a poor source of data for studies relevant to postsecondary education policy.

Classification: General description

25 ED 143 677

Tabler, K. A. *Tabular summary of first follow-up questionnaire data* (NCES 76-212). Washington, D.C.: U.S. Government Printing Office, 1976.

The tabular results (codebook) of the First Follow-up Questionnaire are presented for each item in the questionnaire. Results are given for the total sample as well as for subpopulations defined by sex, race, ability, SES, high school program, region; sex by race, sex by ability, sex by SES, sex by high school program, sex by region; race by ability, race by SES, race by high school program, and race by region. Actual and weighted subpopulation sizes are

presented along with the percentage distributions of responses for each item for these groups.
Classification: General description (summary of survey data)

26 Vol. I, ED 103 452; Vol. II, ED 103 453
Thompson, B. W. *Tabular summary of student questionnaire data, Volumes I and II* (74-227a and 74-227b). Washington, D.C.: U.S. Government Printing Office, 1974.

This report contains the base-year survey questionnaire data for each item. Statistics are given for the total sample as well as subgroups defined by sex, high school program, race, and father's education and by the four classification variables combined. Actual and weighted statistics are presented.
Classification: General description (summary of survey data)

Labor Force Participation

27
Black, M. *An Analysis of youth job search and geographic mobility* (NCES contract). Washington, D.C.: Mathematica Policy Research, June 1980.

This research examines related aspects of the mechanism by which recent high school graduates achieve success in the labor market. In the first chapter, the sources of data used in the empirical analyses are described and the major empirical results are summarized. A general background of youth employment problems and education policy issues are described in Chapter II, the current state of the literature is reviewed in Chapter III, and in Chapter IV a theoretical model of job-location mobility is formulated which provides the conceptual foundation for specifying the empirical models and for interpreting the estimated coefficients. In Chapter V, a probability model of migration is used to estimate the determinants of long-distance moves (greater than 100 miles) that are undertaken in either the first two years following high school (1972-74) and/or the second two years after graduation (1974-76). In Chapter VI, the implications of job and geographic location mobility, as well as the impacts of other explanatory variables, are analyzed in terms of (1) the probability of being employed in October 1976 and (2) the two-year percentage change in wage rates that occurred between October 1974 and October 1976. In Chapter VII, job search methods used by young workers are examined both in terms of the frequency of use and by the extent to which methods used were more or less likely to lead to employment. The effect of search methods on the percentage change in wage rates (1974-76) are also estimated.
Classification: Labor force participation

28 ED 133 430
Breglio, V. J., Stevers, M., & Tobias, J. *An assessment of school supervised work education programs, Part II: Urban cooperative work education programs and follow-up study, Volume 2: Work education program outcomes—a twenty-four month follow-up study* (OPBE Contract No. OEC-0-74-8718). San Francisco, California: Olympus Research Centers, March 1976.

This study assesses the effectiveness of school-supervised work education programs. The stated purposes of the study are (1) to provide useful information on the relationships between the kinds of experiences students receive in various types of work education programs and their postprogram experiences; (2) to identify and analyze existing constraints or limitations in carrying out the various work education programs, including both "internal" and "external" constraints; and (3) to determine the feasibility of expanding cooperative work education programs. The specific purposes of Part II of the study were (1) to discover more about the operation of cooperative work education programs in large cities, and (2) to determine the postprogram experiences of both participants and nonparticipants interviewed in conjunction with Part I of the study. A portion of this research involves the comparison of vocational-education students from the NLS with those students who were interviewed during the first part of the study. Analyses using NLS base-year and first follow-up data yielded results dealing with labor force status, current weekly earnings, 52-week employment stability, and current job satisfaction, similar to those results obtained from the comparison group.
Classification: Labor force participation; vocational-technical education

29
Derrick, F. W. *The work decision of college students.* Unpublished doctoral dissertation, North Carolina State University, Raleigh, North Carolina, 1976.

The objectives of this thesis are to analyze the factors which determine an individual's participation in the labor market as defined by working during the academic year and/or during the summer while enrolled in higher education as a full-time student, and to obtain empirical estimates of two important parameters embedded in the life cycle model of human capital accumulation.

Data were drawn from the National Longitudinal Study field test (the first two surveys) of the class of 1971 and the National Longitudinal Study, base year and first follow-up. The data sets include only full-time students at public four-year colleges or universities during the first year after graduation from high school. The data set of the class of 1971 was used to create hypotheses to be tested. Study of the variables affecting the individual's decision to work or not to work was based on a finding in the life cycle model developed by Thomas Johnson. It was found that the direct aid received by the student, the maximum wage, and the amount of state subsidy per student have a significant effect on the full-time student's work decision. The individual's sex and race were found to be shifters which have a significant effect on the probability that the individual will work.

Classification: Labor force participation

30

Dresch, S. P., & Waldenberg, A. L. *Labor market incentives, intellectual competence and college attendance.* New Haven, Connecticut: Institute for Demographic and Economic Studies, Inc., March 1978. (Revised)

This study evaluates the effects of relative labor market opportunities for highly educated persons on high school academic achievement and college attendance, using data from two national cohort studies of high school students: The National Longitudinal Study and the American College Testing sample of approximately 21,000 1973 high school juniors, resurveyed in 1976 by the Institute for Demographic and Economic Studies.

Across regions, declines in the expected lifetime earnings of college graduates were found to induce declines in reading and mathematics test scores of high school students, particularly for females. Similarly, declines in earnings of college graduates will induce declines in the probability of college attendance. The effect of discouraging college attendance is more marked for women than for men.

Effects of family structure and socioeconomic status on academic performance and college attendance are also examined in terms of an economic model.

Classification: Labor force participation

31

Falk, W. W., Falkowski, C. K., & Lyson, T. A. *Some plan to become teachers: Further elaboration and specification.* Paper presented at the March 1980 Southern Sociological Society Meeting, Knoxville, Tennessee. (Support provided in part by the Louisiana and South Carolina Agriculture Experiment Stations)

This paper further elaborates and specifies the hypothesis of Schwarzweller and Lyson (1978) that the teaching profession often serves as a feasible mobility option for young people whose occupational alternatives may be limited. Specifically, in this study, NLS results can be applied nationally and race is introduced as a control variable. Because early occupational plans were needed for this study for comparison to the earlier study, NLS data for 1972 and 1973 were used. Black (n = 831) and white (n = 700) students were used for this analysis.

Conclusions from this analysis are as follows: (a) teaching may not be as popular a vocational pursuit as it once was, especially for blacks and women; and (b) the factors most related to becoming a teacher may have less to do with residence, father's occupation, scholastic performance, or race than with sex.

Classification: Labor force participation; personal, career, and psychological development

32

Griffin, L. J., Kalleberg, A. L., and Alexander, K. L. *Determinants of early labor market entry and attainment: A study of labor market segmentation.* Research supported by NIE Grant No. NIE-G-78-0210 to the Center for Social Organization of Schools, The Johns Hopkins University, Baltimore, Maryland, 1981.

In this study of noncollege educated workers, the authors attempted to identify the basis upon which some workers are channeled into secondary sector employment and others into the primary sector (a concept described in the dual labor market theory) and to assess the early career-related consequences of incumbency in one or the other labor market segment. The research was guided by, and thus has implications for the dual labor-market theory.

Data from the NLS base-year through third follow-up were used in this analysis. The subsample utilized in this paper consists of those respondents who were known to be in the labor force in 1973, 1974, and 1976 and who, as of 1976, had never attended a two-year or four-year college or university.

Findings include: (1) workers in the primary sector obtained greater earnings and career advancement than those in the secondary market; (2) workers experienced considerable inter-sectoral mobility; (3) there were few differences in the kinds of workers employed in the two sectors and (4) similar within-sector achievement processes during the first several years of employment were found. Findings 2, 3, and 4 are in contrast to the dual labor market theory which states that the primary and secondary sectors are governed by fundamentally different market mechanisms and evidence distinctive achievement processes.

Classification: Labor force participation; personal, career, and psychological development

33

Harrell, A. V., & Wirtz, P. W. *Social and educational antecedents to youth unemployment.* Washington, D.C.: The George Washington University, Social Research Group for the Department of Labor, August 1979.

This report deals with youth employment. The relationship of the transition process from school to labor market experiences is the topic of Chapter II. Chapter III reviews the literature on status attainment, looking for clues to differential labor market success identified in studies of the attainment of occupations with high prestige and/or income. Chapters IV, V, and VI investigate unemployment among youth who did enroll in full-time post-secondary education in the first four years after high school. The effects of family background, personal attributes, educational experiences, and the influence of other persons on cumulative unemployment across the four year period are reported in Chapter IV and the analyses of these factors among Black, Hispanic, male and female subgroups of the sample in Chapter V. Chapter VI looks at unemployment in each of the four years (1972-1976) separately, incorporating the effects of prior labor market experience and transition to adult roles in the prediction of unemployment in later years. The final chapter looks briefly at the characteristics and educational experiences of youth associated with employment in the post-high school years.

Classification: Labor force participation

34

Hill, R. *Discrimination and minority youth employment.* Waltham, Massachusetts: Brandeis University, Center for Public Service, April 1980. (Commissioned by the Vice President's Task Force on Youth Employment)

This paper considers questions related to (1) the impact of employment programs on minority youth unemployment, and (2) what has been learned to help improve the current programs and help develop future programs designed to reduce the high levels of unemployment among minority youth.

An overview is presented of the key research findings of the NLS and other studies regarding the relative role of discrimination among other factors as determinants of joblessness among minority youth. A description of various kinds of governmental employment programs developed since the 1960's is presented along with an assessment of their impact on minority youth.

Strategies are recommended for increasing the effectiveness of targeting employment programs to minority youth.

Classification: Labor force participation

35

Holsinger, D. B. *Early school to work transition profiles of Anglo and Mexican-American high school graduates in the southwest: A study of the high school class of 1972.* Tucson, Arizona: The University of Arizona, August 1980. (Prepared for the Employment and Training Administration, U.S. Department of Labor, under a research and development grant)

This study describes a portion of the career formation process for Mexican-American and Anglo high school graduates. Data drawn from three follow-ups of the NLS were used to identify post graduation activity states. Individuals of similar activity state sequences were coded into transition profiles to determine the effect of profile membership on occupational aspiration and income four years after graduation. The study found that females (excluding those in the homemaker category) had higher job aspirations than males; and Anglos, higher than Mexican-Americans. Mexican-American students are located infrequently in four-year college profiles and disproportionately in work-related profiles. Mexican-American high school students need the following: (1) better labor market information, (2) enhanced opportunity for post-secondary education, and (3) heightened awareness of consequences of early transition activities.

Classification: Labor force participation; personal, career, and psychological development

36

Johnson, T. *Time in School: The case of the prudent patron* (Paper No. 4594, Journal Series of the

North Carolina Agricultural Experiment Station). Raleigh, North Carolina: North Carolina State University, Department of Economics and Statistics, August 1976.

This paper explores the properties of a life cycle model of human capital accumulation under the assumptions that the individual cannot borrow to finance his schooling but may receive an allowance while specializing. This allowance is constant, regardless of the amount of human capital accumulated, and should be interpreted to include subsidies to tuition as well as funds to cover a "subsistance" level of living. It is also assumed that the specializing student cannot rent his or her human capital for the same rate as he could if he or she were not specializing. This produces the empirically familiar "notch" in the fraction of each year spent investing in human capital.

Numerical estimates of the responsiveness to changes in parameter values indicate that, in most cases, increasing the student wage has little effect on both time spent in school and income later in life. On the other hand, increasing the allowance does increase the time spent in school. However, with ability and endowment held constant, increasing the allowance "twists" the life-time earnings profile, increasing net earnings early in life but decreasing net earnings past age 45.

Empirical research is continuing with the larger sample of the high school graduating class of 1972, with which the author hopes to improve the understanding of the market work decision of students.

Classification: Labor force participation.

37

Lazear, E. The narrowing of black-white wage differentials is illusory. *American Economic Review,* 69 (4), September 1979.

This paper employs a method to estimate the unobserved component (for example, on the-the-job training) of wages. The size of this component is calculated for nonwhites and whites separately and then compared. Since, as it turns out, the component is larger for whites than nonwhites, observed wage differentials understate true differentials. More important is that the comparison of the period of 1966-69 with 1972-74 reveals that this unobserved differential increased substantially over time. The results of this study suggest that although the pecuniary nonwhite-white differential has narrowed substantially between 1966 and 1974 for young men, the OJT differential has increased by almost the same amount. This implies that in real wealth terms there has been little narrowing of the white-nonwhite differential in wages, an idea contrary to results in recent literature.

This analysis selected a subsample of males from the NLS base year, first and second follow-ups who reported wages and were not missing other relevant information (2,397 individuals).

Classification: Labor force participation

38

Lazear, E. P. Male-female wage differentials: Has the government had any effect? Reprint from *Women in the Labor Market,* edited by Cynthia B. Lloyd, et al., New York, Columbia University Press, 1979.

This article demonstrates that there was a substantial narrowing of the male-female wage differential for young cohorts in the six-year period between 1968 and 1974. This narrowing effect does not appear to reflect differences in pre-employment characteristics of the two subpopulations. Furthermore, the increase in the relative earnings of females took place to a large extent as the result of an increase in their rate of wage growth, which reflects investment in on-the-job training. Thus, one expects that age-earnings profiles for females should diverge from those for males to a much lesser extent than they did in the past. The findings imply that male-female wealth differentials have narrowed to a greater extent than examination of a cross-section on wages would imply. Since age-earnings profiles for men and women fan out less now than they did in the past, the ratio of male measured wages to female-measured wages is a better approximation of male wealth to female wealth now. The understatement of the latter, more relevant ratio has declined over time.

The years 1968-69 are analyzed with the use of the National Longitudinal Surveys and 1973-74 are analyzed through the NLS data.

Classification: Labor force participation; women

39

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The objective of this study is to determine the effects of a minimum wage on employment, specifically whether any wage increases produced by a minimum wage are offset by reductions in wage growth. If this occurs according to this hypothesis, the minimum wage is effectively avoided by employer through the reallocation of

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Classification: Labor force participation; women

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The objective of this study is to determine the effects of a minimum wage on employment, specifically whether any wage increases produced by a minimum wage are offset by reductions in wage growth. If this occurs according to this hypothesis, the minimum wage is effectively avoided by employer through the reallocation of compensation to current wages from other components, total compensation remaining approximately unchanged.

The authors conclude that the retardation effect of the minimum wage on wage growth, although potentially important, can only be observed when direct minimum wage effects are large.

The data for this study were drawn from the National Longitudinal Survey on Young Men, 1966-1975 and the National Longitudinal Study of the High School Class of 1972.
Classification: Labor force participation

40
Meyer, R. H., & Wise, D. A. *High school preparation and early labor force experience.* Cambridge, Massachusetts: John Fitzgerald Kennedy School of Government, Harvard University. April 1980. Number 86. (Contract from the U.S. Department of Labor to the NBER)

The relationship between high school training and work experience on the one hand and early labor force experience on the other were analyzed in this paper. In addition, the extent and nature of the persistence of early labor force experience was evaluated in this study based on data for male youths from the NLS. Results showed that while there appeared to be no relationship between job related training in high school and post-graduation weeks worked or wage rates, there was a strong relationship between hours worked while in high school and both weeks worked and wage rates in the first four years after graduation. High school class rank and test scores also were found to be positively related to early weeks worked and wage rates in the labor force.

It was found that after controlling for individual specific characteristics of youth, there was little relationship between weeks worked in the first year after high school graduation and weeks worked four years later. And there was almost no relationship between initial wage rates and wage rates four years later, other than those attributable to measured and unmeasured individual specific characteristics. There was little persistence of early experience that cannot be attributed to heterogeneity among youth. There was, however, an effect of early work experience on later wage rates, although it was of modest magnitude in this sample of high school graduates.
Classification: Labor force participation; secondary education (school or or program effects)

41 ED 113 526
National Center for Education Statistics. Effectiveness of high school job training: Assessment of the class of 1972 one and one-half years after graduation. *Advance Statistics for Management Bulletin* (Number 22). Washington, D.C.: National Center for Education Statistics, August 1975.

Statistical highlights on educational issues presented in this bulletin are (1) distribution of high school seniors by program of study, (2) job training received in high school, (3) employment in jobs where expected to use training, and (4) satisfaction with training of those who worked in training-related jobs.
Classification: Labor force participation

42
Schmidt, W. *Job expectations of the high school class of 1972.* Michigan State University. East Lansing, Michigan. 1977.

Based upon the base-year and the second follow-up survey data, it was found that, on the average, young adults two and one-half years after high school graduation have not substantially changed their occupational expectations. It was also found that percentages for each of the occupational categories differ dramatically from the total labor force needs projected by the U.S. Department of Labor by the time those people are 30 years old.
Classification: Labor force participation

43 ED 121 987 Tests and Measurement
Tabler, K. A. *Research and information on employment and training: Local, state, and federal communications, results and utilizations.* Symposium cosponsored by Pennsylvania State Board of Education and U.S. Department of Labor, Region III, Hershey, Pennsylvania, June 9-10, 1975.

This paper presents a broad overview of the NLS and identifies some relevant data about occupational planning and outcomes to illustrate the potential use of the data base.
Classification: Labor force participation

44
Walther, R. H. *Analysis and synthesis of DOL experiences in youth transition to work programs.* Washington, D.C.: George Washington University, December 1976. (Prepared under Grant No. 21-1-76-16)

This report was initiated because of a concern about the problems of youth entering the labor market and making an initial adjustment to work.

It is hoped that the data, interpretations, and conclusions can be translated into suggestions and guidelines for the benefit of CETA prime sponsors.

The report also can serve as a contribution to the dissemination and utilization of what has been learned from research and development projects. Finally, this mechanism might also be a means of contributing Department of Labor experience to the interagency committees discussing the issues in larger terms.

Classification: Labor force participation

METHODOLOGY

45 ED 161 921

Bailey, J. P., Jr. *National Longitudinal Study of the High School Class of 1972: First follow-up survey final methodological report.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, March 1976.

This is the formal report of activities conducted in carrying out the study. In this sense it is methodological, historical, and descriptive in nature, rather than technical and analytical. The numerous reports of the latter character, produced in conjunction with the study over a period of time, are listed and abstracted in Appendix A and described in the text within appropriate chapters.

There are ten chapters in the report:

I. Overview: The National Longitudinal Study of the Class of 1972.
II. Sample Design and Survey Participation
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IV. Maximizing Participation and Response
V. Preparation of the NLS Data File
VI. Weight Calculations
VII. Sampling Error Estimates
VIII. Composite Variables for Studying Student Participants
IX. Methodological Studies
X. Descriptive Analysis

Classification: Methodology (sample design and effects, data collection procedures, instrumentation, weight calculation, variable and file construction)

46 ED 152 788

Bailey, J. P., Jr. *National Longitudinal Study of the High School Class of 1972: Second follow-up survey: Final methodological report.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, October 1976.

This document is the formal report of activities during the second follow-up survey. As with the first follow-up survey report, it is methodological, historical, and descriptive in nature, rather than analytical. The several reports of a more technical nature produced in conjunction with the survey, as well as major revisions of previous reports, are listed and abstracted in Appendix A.

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VII. Reliability of NLS Data
VIII. Preliminary Analyses and Results

There are five appendices.

Classification: Methodology (sample design and effects, instrumentation, data collection procedures, weight calculation, variable and file construction)

47

Blaschke, T. J., Haggstrom, G. W., & Morrison, P. A. *Procedures for estimating parenthood and marital status for respondents to the National Longitudinal Study of the High School Class of 1972* (NICHD Contract No. NO1-HD-72819). Santa Monica, California: The Rand Corporation, January 1979.

Users of the National Longitudinal Study of the High School Class of 1972 (NLS) data often need to track the processes whereby families are formed, expanded, and dissolved. Specific variables that mark these processes—changes in marital status and parenthood status—are imperfectly measured by the NLS. In many cases, important items are missing, raising the possibility of systematic biases in analyzing the data.

This paper outlines procedures devised for estimating changes in parenthood and marital status for NLS respondents. Variables that summarize the information on parenthood and marital status are estimated: number of children as of the first week of October in 1973, 1974, and 1976; a composite estimate of the date of first marriage; and marital status as of the first week of October in 1973, 1974, and 1976.

To facilitate the adoption of the procedures for other users, a FORTRAN subroutine that creates these variables is provided.

Classification: Methodology (imputation and analysis strategy, nonresponse bias) compensation to current wages from other components, total compensation remaining approximately unchanged.

The authors conclude that the retardation effect of the minimum wage on wage growth, although potentially important, can only be observed when direct minimum wage effects are large.

The data for this study were drawn from the National Longitudinal Survey on Young Men, 1966-1975 and the National Longitudinal Study of the High School Class of 1972.
Classification: Labor force participation

40
Meyer, R. H., & Wise, D. A. *High school preparation and early labor force experience.* Cambridge, Massachusetts: John Fitzgerald Kennedy School of Government, Harvard University. April 1980. Number 86. (Contract from the U.S. Department of Labor to the NBER)

The relationship between high school training and work experience on the one hand and early labor force experience on the other were analyzed in this paper. In addition, the extent and nature of the persistence of early labor force experience was evaluated in this study based on data for male youths from the NLS. Results showed that while there appeared to be no relationship between job related training in high school and post-graduation weeks worked or wage rates, there was a strong relationship between hours worked while in high school and both weeks worked and wage rates in the first four years after graduation. High school class rank and test scores also were found to be positively related to early weeks worked and wage rates in the labor force.

It was found that after controlling for individual specific characteristics of youth, there was little relationship between weeks worked in the first year after high school graduation and weeks worked four years later. And there was almost no relationship between initial wage rates and wage rates four years later, other than those attributable to measured and unmeasured individual specific characteristics. There was little persistence of early experience that cannot be attributed to heterogeneity among youth. There was, however, an effect of early work experience on later wage rates, although it was of modest magnitude in this sample of high school graduates.
Classification: Labor force participation; secondary education (school or or program effects)

41 ED 113 526
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METHODOLOGY

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Classification: Methodology (sample design and effects, data collection procedures, instrumentation, weight calculation, variable and file construction)

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To facilitate the adoption of the procedures for other users, a FORTRAN subroutine that creates these variables is provided.

Classification: Methodology (imputation and analysis strategy, nonresponse bias)

48 ED 115 682

Breland, H. M., Stocking, M., Pinchak, B. M., & Abrams, N. *The cross-cultural stability of mental test items: An investigation of response patterns for ten socio-cultural groups* (NIE Grant No. NE-6-00-3-0116). Princeton, New Jersey: Educational Testing Service, February 1974.

This study explores the complex problem of testing in a pluralistic society, suggesting a new way of thinking about test use and construction. The analysis was performed on data from over 14,000 high school seniors, members of the NLS sample, with respect to sociocultural differences in response to cognitive test items. Using a vector index of cross-cultural stability, items having notable patterns of instability were examined closely for factors which might explain such an outcome. The greatest instabilities were noted among the vocabulary items. Mathematical knowledge obtainable from everyday life situations, such as counting money, is less difficult for minority groups than very simple mathematical problems.

Classification: Methodology (measurement property)

49

Carroll, C. D. *The structure and impact of postsecondary educational opportunity: Measurement associated with postsecondary education financing variables.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California, April 1979.

This paper discusses problems associated with survey items concerning postsecondary expenditures and financing based on the NLS, the Cooperative Institutional Research Program's Freshman Survey, and the National Evaluation of the Upward Bound Program. These difficulties include inconsistencies in response, response biases, high nonresponse rates, and lack of knowledge on the part of respondents.

Analytic problems presented by survey questions on financial information are discussed, and hypothesized procedures for the collection and imputation of these data are presented.

Classification: Methodology (imputation and analysis strategies, data collection procedures); postsecondary education: access (financial aid)

50

Center for Educational Research and Evaluation. *Imputation procedures for NLS data base.* Research Triangle Park, North Carolina: Research Triangle Institute, January 1975.

This paper documents the imputation procedures used for the first follow-up data. The procedures involved three phases: (1) direct logical inferences (e.g., type of school from its name and address); (2) indirect logical inferences (e.g., impute studying full-time for those who are studying and not working); (3) statistical imputations (e.g., impute a value in accordance with the probability distribution of the values for given cells defined by the basic classification variables and relevant activity state information).

51 ED 152 787

Chandler, M. O. *The longitudinal study of educational effects: Design of the follow-up surveys.* Paper presented at the annual meeting of the American Association for the Advancement of Science, San Francisco, California, March 1974.

This paper presents the design of the follow-up surveys and discusses various aspects, such as potential problems of nonresponse, tracing the base-year group, follow-up strategy, and response rates. The paper also highlights the content of the questionnaires, pointing out some data analyses which NCES plans to do plus some potential analysis in which other sectors of the education community could play a major role.

Classification: Methodology (sample design and effects, data collection procedures); other (research priority)

52

Christoffel, P., Fleming, E. L., & Thompson, B. W. Data base description and planned OPBE analyses of the National Longitudinal Study. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana, February 1973.

This paper describes the base-year survey data files and research intentions by OPBE in using the data files. In particular, the evaluation of vocational education and Federal programs is emphasized.

Classification: Methodology (variable and file construction); other (research priority)

53 ED 151 387

Collins, E. F., & Bailey, J. P., Jr. *The national longitudinal study of the high school class of 1972: First follow-up survey procedures to maximize participation.* Paper presented at the annual meeting of the American Educational Research Association, Washington, D. C., April 1975.

This paper discusses the first follow-up survey of the NLS, with emphasis on the field survey procedures employed, the response rate obtained, and

the recommendations which were made for procedures to be implemented in the second follow-up.
Classification: Methodology (data collection procedures)

54

Conger, A. J., Conger, J. C., & Riccobono, J. A. *National longitudinal study of the high school class of 1972: Validity and reliability of selected national longitudinal study data* (NCES Contract No. OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, May 1976.

This report contains information about the reliability and validity of the basic NLS questionnaires and survey research in general. It also evaluates reliability and validity as a function of question and respondent characteristics and data collection procedures.

The key part of the reliability study is an empirical analysis of selected NLS items on a sample of NLS respondents. Included is an evaluation of test-retest reliability as a function of the data collection procedures of mail-in or personal interview, item and respondent characteristics, and the interaction of these diverse factors. Included are guidelines for analyzing survey data and for improving the quality of data in survey studies.

The literature and reliability study are consistent in the finding that contemporaneous objective, factually oriented items are more reliable than subjective, temporally remote or ambiguous items. The validity results are similarly consistent.

In terms of data collection, there is no singularly best procedure for collecting reliable valid survey data. Interviews lose information on factual archival data and mail-in questionnaires lose information on other variables.

On the question of respondent characteristics, validity studies indicated that race is an important variable, with black and low SES respondents providing less accurate information than whites or high SES respondents.

The differences found in reliability and validity as a function of race, sex, SES, and ability can have profound consequences for research. Generalizing results across populations which differ on respondent characteristics would be highly problematic.
Classification: Methodology (measurement property, data collection procedures)

55 ED 151 396

Conger, A. J., Conger, J. C., & Riccobono, J. A. *Reliability and validity of National Longitudinal Study measures: An empirical reliability analysis of selected data and review of the literature on the validity and reliability of survey research questions.* Research Triangle Park, North Carolina: Research Triangle Institute, July 1976.

This report is divided into four major sections. The first section briefly summarizes the purpose of NLS, the sample design, and characteristics of the questionnaires. The second major section provides a comprehensive review of validity and reliability for NLS-type questions and respondents. The third and major section presents a detailed study of the reliability of a sample of Second Follow-Up Questionnaire items on a sample of NLS respondents, including an evaluation of test-retest reliability as a function of data collection procedures (mail-in personal interview), item characteristics (response format, item content, and item length), respondent characteristics (sex, ethnicity, SES, and ability), and the interaction of these diverse factors. The final section integrates the conclusions of the literature review and reliability study results and discusses the implications of these results for survey research.
Classification: Methodology (measurement property)

56

Cox, B. G., & Folsom, R. E. *An empirical investigation of alternate item nonresponse adjustments.* Paper presented at the annual meeting of the American Statistical Association, San Diego, California, August 15, 1978.

Two methods frequently used by statisticians to adjust for bias induced by nonresponse to survey items are examined in this paper: the hot deck and weighting class adjustment techniques were compared, using the data from the National Longitudinal Study. In general, no significant gains in precision were achieved by using the imputation procedures; however, the authors emphasize that more complex statistical analyses frequently necessitate some type of nonresponse adjustment. Also, the longitudinal, cumulative nature of many NLS questions will eventually call for some adjustment technique to permit analysis.
Classification: Methodology (imputation and analysis strategy)

57

Dunteman, G. Alternative solutions to the missing OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, November 1974.

The purpose of this report is to discuss a complete set of unweighted Activity State Analyses tables. In the course of this discussion, it was noticed that 3,100 out of the 21,349 (14.52 percent) first follow-up respondents could not be classified into one of sixteen mutually exclusive activity states for October 1972. Similarly, 2,433 out of the 21,249 (11.40 percent) first follow-up respondents could not be classified into one of the same set of sixteen mutually exclusive activity states for October 1973. (More respondents could be classified for October 1973 than October 1972 because '73 information for both work and study was asked for initially in their respective sections.) In order to classify a person into one of the sixteen mutually exclusive activity states for either October, a credible response to four and in some instances five questions was required. Eight pieces of information in all were needed to define the 16 states for each October date.

The following are alternatives to cope with the unclassifiable activity state problem: Alternative I, redefinition of activity states; Alternative II, redefinition plus supplemental activities for part-time versus full-time distinction; Alternative III is Alternative I with resolution for missing type of school information; Alternative IV, Alternative II with resolution for missing type of school; and Alternative V, Supplemental Alternative III or IV with additional data collection in conjunction with second follow-up special procedures.

Classification: Methodology (imputation and analysis strategies)

58 ED 146 870

Dunteman, G. H., & Peng, S. S. *Some analysis strategies applied to the National Longitudinal Study of High School Class of 1972.* Research Triangle Park, North Carolina: Research Triangle Institute. Presented at the 1977 Eastern North American Region Joint Meetings of the Institute of Mathematical Statistics and the American Statistical Association, Chapel Hill, North Carolina, April 18-20.

The purpose of this report is to describe some analysis techniques applied to the NLS data in order that the application of analytic techniques to actual substantive survey data will enhance the understanding of the utility of various analytic approaches to analyzing longitudinal data.

The techniques employed to analyze the data are presented and discussed: a weighting class procedure for adjusting for questionnaire nonresponse, log-linear modeling, path analysis, discriminant analysis, two types of analysis-of-variance models (univariate and multivariate) and analysis of covariance structures. In addition to descriptions of these techniques, the problems associated with longitudinal analyses are discussed, with the major problem identified as the difficulty in correctly specifying a model to explain change in psychological attitudes and educational and career progression over time.

Classification: Methodology (imputation and analysis strategies)

59 ED 170 302

Dunteman, G. H., Peng, S. S., & Holt, M. M. *Composite score analysis: ability index, SES index, some psychological and educational construct scales.* Research Triangle Park, North Carolina: Research Triangle Institute, August 1975.

The first set of NLS data was analyzed to derive composite scores to be used in subsequent analyses. The composites include a general ability measure, a socioeconomic status (SES) index, and factor scores from factor analyses of sets of question items measuring goals, attitudes, and other psychological attributes. The derived composites can be used to help define subpopulations for descriptive statistics and as independent or control variables in some analytic studies. Procedures and results of the composite score analyses are presented in the three sections of the document. Four appendixes contain Duncan SEI scores for FFU Q.93, group means for substitution of missing data, principal components factor matrixes, analysis means, and standard deviations used for standardization.

Classification: Methodology (variable and file construction)

60

Echternacht, G. J. *Reliability and validity of questionnaire items—status, social-psychological, and educational plans and aspirations variables.* Princeton, New Jersey: Educational Testing Service, April 1974. (Draft)

This article provides a rationale for conducting resurveys for the purpose of measuring reliability and validity, demonstrates procedures for conducting and analyzing resurveys, and provides a concrete example of one such resurvey effort, a reliability and validity study using two random samples drawn from the NLS.

It was concluded that resurveying subsamples of a survey provides valuable information for both the study and project staff, especially when the survey will be repeated or respondents will be followed up, including (1) estimates of bias which have implications for future questionnaire design, (2) estimates of reliability which aid in interpreting multivariate analyses of the data, and (3) a check on the thoroughness of the data collection system.

Classification: Methodology (measurement property)

61

Eckland, B. K., Henderson, L. B., Tickamyer, A. R, & *Trent, W. T. Constructed education variables* (NCES Contract No. OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, January 1981.

As of October 1976, over four years had passed since members of the National Longitudinal Study of the High School Class of 1972 had left high school.

The purpose of this report is to define four basic research variables related to the educational progress of these students: (a) all undergraduate enrollments in academic college programs for each year between October 1972 and October 1976, (b) college graduates in October 1976, (c) postgraduate students in October 1976, and (d) earned credit hours as of October 1976. The definition of these variables appears to be fairly straightforward, but contruction is complex.

Classification: Methodology (variable and file construction)

62 ED 146 189

Fetters, W. B. *National Longitudinal Study of the School Class of 1972 sample design efficiency study: Effects of stratification, clustering, and unequal weighting on the variances of NLS statistics* (NCES Publication No. 77-258). Washington, D.C.: National Center for Education Statistics, 1977.

A complex two-stage sample selection process was used in designing the National Longitudinal Study (NLS) of the High School Class of 1972. The first-stage sampling frame used in the selection of schools was stratified by the following seven variables:

- Type of control (public or private)
- Geographic region (Northeast, North Central, South, and West)
- Grade-12 enrollment (less than 300, 300 to 599, and 600 or more)
- Proximity to institutions of higher learning (3 categories)
- Percent minority group enrollment (8 categories, public schools only)
- Income level of the community (11 categories, public schools; 8 categories, Catholic schools)
- Degree of urbanization (10 categories).

Both priority considerations and judgment were used in consolidating the various classes to produce the 600 final strata from which a sample of 1,200 schools was chosen. The second stage of the sample selection involved choosing a simple random sample of 18 seniors per high school. This report considers the effects of stratification, oversampling of schools by percent minority group enrollment and income level of the community, clustering of students within a school, and unequal weighting on the variances of the resulting statistics and hence, the precision of the sample statistics.

The results suggest that school stratification variables reduced the variances of national estimates by 20 percent below what would have been expected with unstratified cluster sampling. Variances of subpopulation were reduced by lesser amounts, from 6 to 20 percent, depending upon the subpopulation. Clustering the sample of students increased variances of national estimates by an estimated 83.5 percent over simple random sampling with smaller increases for various subgroups. In general, the increase in variance due to cluster sampling is only partly offset by the reduction due to stratification.

Of the five major stratification variables, SES (socioeconomic status), size of school, type of control, geographic region, and proximity to college or university, region is perhaps the strongest; type of control is the weakest; and the other three lie somewhere between.

The final section of the report describes a limited and approximate analysis to secure rough indications of the effects of unequal weightings due to oversampling, nonresponse adjustments, unequal stratum sizes, and imprecise school size measures.

Classification: Methodology (sample design and effects)

63

Folsom, R. E., Jr. *Variance components for NLS: Partitioning the design effect.* Research Triangle Park, North Carolina: Research Triangle Institute, January 1975.

When the precision of sample statistics from a complex survey design like that of NLS is examined, it is useful to establish a set of standards. One such standard is the precision that would have been attained had an equal-sized simple random sample of respondents been selected. Leslie Kish introduced Design Effect (DEFF)—the actual variance of

a sample statistic divided by the variance appropriate for an equal-sized simple random sample. The DEFF mesures the combined effects of all the selection and estimation procedures on the precision of sample statistics. The purpose of this report is to demonstrate a variance components methodology for partitioning the overall design effect (D) for a ratio mean into stratification (S), unequal weighting (W), and clustering (C) effects, so that D = WSC.
Classification: Methodology (sample design and effects)

64 ED 167 566
Folsom, R. E., Jr. A survey measurement error model for repeated binary responses. Research Triangle Park, North Carolina: Research Triangle Institute, September 1976.

This working paper focuses on the analysis of repeated survey measurements with emphasis on the misclassification error aspects of the Census Bureau model for binary (0-1) variables. Separate sections of this paper present a specification of the Census Bureau model for 0-1 variables which postulate a "true value" for each potential respondent and emphasize the misclassification aspects of the error distribution, explore bias and variance implications of the measurement error model for sample proportions, present the expectations of several measures of inconsistency for repeated measurement surveys, and summarize the results, concentrating on practical implications regarding the analysis of repeated survey measurements such as those of the NLS.
Classification: Methodology (measurement property)

65 ED 164 563
Folsom, R. E., Jr., & Weber, J. H. *Relative efficiencies of a three-stage versus a two-stage sample design for a new NLS cohort study.* Research Triangle Park, North Carolina: Research Triangle Institute, March 1976.

In a previous National Longitudinal Study sample design efficiency report, optimum numbers of schools and seniors per school for a new cohort sample were estimated. Because of interviewer travel costs associated with multiple follow-up surveys, a three-stage design clustering schools in primary sampling units (PSUs) of one or more counties might in the long run be a cost-effective alternative. This report compares the efficiency of a deeply stratified three-stage design patterned after RTI's National Assessment of Educational Progress (NAEP) sample to an optimized version of the 1972 two-stage design.
Classification: Methodology (sample design and effects)

66 ED 167 569
Folsom, R. E., Jr., & Weber, J. H. *Limited investigation of the effects of stratification, clustering, respondent mobility, and overlapping schools with the 1972 sample.* Research Triangle Park, North Carolina: Research Triangle Institute, April 1976.

Longitudinal measures of change are the most important kinds of estimates being produced from the NLS survey. Several topics are presented in this report, most of which build on previous variance components analyses. The major areas covered are effects of stratification and clustering, correlations from overlapping schools in the two NLS surveys, and mobility of the NLS 1972 cohort.
Classification: Methodology (sample design and effects)

67
Henderson, L. B., Allen, D. R., & Levinsohn, J. R. *National longitudinal survey data entry quality control: The third follow-up survey.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, March 1978.

This is one of several technical reports that document specific components of the continuing work and research that support the NLS. It details certain aspects of the data entry quality control methods and results for the third follow-up survey. It is intended as a documentary and technical report for those familiar with the NLS.
Classification: Methodology (data entry quality control)

68
Hilton, T. L., & Rhett, H. *The base-year survey of the National Logitudinal Study of the High School Class of 1972.* Princeton, New Jersey: Educational Testing Service, June 1973.

This report describes the operations and summarizes the results of the base-year survey of the National Longitudinal Study conducted by the Educational Testing Service for the National Center for Education Statistics in the spring of 1972. Seven appendices, bound in separate volumes, include copies of all data collection instruments and documents created for the base-year survey, descriptive summaries of all questionnaire responses and test scores, and the full text of a manual written for future data file users.

Classification: Methodology (sample design and effects, instrumentation, data collection procedures); general description

69

Horvitz, D. G., Mason K., Bayless, D., Jackson, D., Hunt, N., & Koch, G. *The design of a longitudinal survey of secondary school seniors — Final Report, Volumes I and II.* Research Triangle Park, North Carolina: Research Triangle Institute, February 1972.

This report describes the various research tasks and findings of a study undertaken to assist NCES in its efforts to design a broad-based longitudinal survey of secondary school seniors. The report is in two volumes. Volume I discusses the project activities in detail and provides recommendations of the design parameters and procedures for the proposed longitudinal study. Volume II is an appendix volume, containing additional material on special studies carried out after submission of a draft (August 1971), discussions of more highly technical statistical topics, and the various instruments, manuals and forms used in a field test of alternative procedures. It also includes a revised Student Questionnaire recommended to be used with the initial cohort.

Classification: Methodology (survey design)

70 ED 152 790

Howard, W. R. *National Longitudinal Study planning* conference (Final paper from the panel). Chapel Hill, North Carolina, November 1975.

This report summarizes suggestions from the panel members for analysis plans for the second and third follow-ups. There are three appendices included.

Classification: Methodology (imputation and analysis strategy)

71

Ironson, G. H., & Subkoviak, M. J. A comparison of several methods of assessing item bias. *Journal of Educational Measurement,* 16, 209-225, Winter 1979.

This paper is concerned with item bias. Test data from two diverse culture groups were analyzed to determine the agreement among four methods of detecting item bias (transformed difficulty, discrimination differences, chi-square, and ICC). The test battery was composed of 155 items from six subtests: vocabulary, reading comprehension, mathematics, letter groups, picture-number, and mosaic comparisons.

There appeared to be some bias in the battery as indicated by (a) those bias methods having associated significance tests, and (b) a comparison of two white groups showing considerably lower bias indices than the black vs. white comparison of interest.

For the 150 items analyzed, three of the methods (transformed difficulty, chi-square, and ICC approaches) were moderately correlated, However, there was little agreement between the discrimination differences approach and the others. Upon close examination, the percent agreement among the items identified as most biased by each method was moderate.

Classification: Methodology (measurement property)

72

King, D. A. The effects of incentives on response rates on the national longitudinal survey of educational effects (NCES Contract No. OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, June 1979.

The research reported here relates to the use of a three dollar ($3.00) incentive check sent with the initial questionnaire mailing to a half sample of 427 out of 853 members of the high school class of 1971. This report describes the effect of the incentive on the response rate for the total and also for a number of different subgroups such as prior response status, sex, race, education, and socioeconomic status of parents. Also included is information about the effect on costs and the time lag between initial contact and the return of the completed instrument. Finally there are some comments concerning sample members who cashed their checks as opposed to those who did not.

The evidence indicates that the use of an incentive has a beneficial effect on the response rate and, in some cases, reduces costs. The cost benefit is certainly greater in mixed moded studies that require telephone or personal follow-up of nonrespondents to an initial survey.

Classification: Methodology (data collection procedures)

73

King, D. A. *National longitudinal study: Data collection activities for the fourth follow-up (October 1979 through April 1980)* (NCES Contract No. OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, January

1981. (Draft)

This is the fourth in a series of reports concerning data collection activities for the National Longitudinal Study of the High School Class of 1972 (NLS). This report covers all data collection activities carried out by the Institute during the fourth follow-up survey. Prior reports covered similar activities on the first, second, and third follow-ups.

Fourth follow-up data collection activities began with a field test that was conducted from December 1978 through February 1979 involving a sample of nine hundred 1971 graduates who were used for field testing instrumentation and procedures for the NLS base year and subsequent follow-up surveys.

From June 1979 through April 1980, data collection methods used by RTI to increase the response to the fourth follow-up included mailing newsletters to sample members, tracing by telephone those individuals whose newsletters and/or questionnaires were returned as undeliverable, mailing "lead" letters to a sample members, mailing questionnaires on three occasions and including a $3.00 incentive payment with the initial questionnaire, following up nonrespondents by postcard and mailgram at predetermined intervals, and interviewing in person or by telephone persons not responding to the mail efforts. Copies of the various survey instruments and materials employed in the fourth follow-up survey are included.

Classification: Methodology (data collection procedures)

74 ED 173 373

King, D. A., & Thorne, N. R. *National longitudinal study: Data collection activities for the third follow-up* (Contract No. OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, September 1977.

This is the third in a series of reports concerning the data collection activities on the National Longitudinal Study of the High School Class of 1972. This report covers data collection activities only.

The Third Follow-Up Survey began with a population of 22,135 sample members who were requested to continue their participation in the study. Original sample members, regardless of their response status to base year, first follow-up, or second follow-up were included unless they (1) were deceased, (2) had refused further participation, (3) were physically or mentally incapable of further participation, (4) their whereabouts were unknown to parents or alternate contacts. During the period August 1976 through June 1977, data collection methods used by RTI to increase the response rate included the mailout of newsletters to sample members, telephone tracing of those individuals whose newsletters and/or questionnaires were returned as undeliverable, mailing "alert" letters to sample members and to parents whose address was the same as the sample member, three questionnaire mailouts including a $3.00 incentive payment with the initial questionnaire, and postcard and mailgram follow-ups with nonrespondents to the mail efforts.

Classification: Methodology (data collection procedures)

75 ED 161 919

King, D. A., Weeks, M. F., Thorne, N. R., & Myers, C. S. Data collection activities for the second follow-up (August 1974-June 1975): Final report. Research Triangle Park, North Carolina: Research Triangle Institute, July 1975.

The NLS second follow-up data collection activities involved the mailout of a newsletter to all members of the sample, advisory letters to parents and lead letters to participants, tracing activities for each individual whose newsletter was returned by the post office as undeliverable, questionnaire mailouts, mailout of reminder/thank-you postcards, and mailgram and telephone follow-up contacts with nonrespondents. In addition, a special investigation was conducted to measure the relative impact of mailgrams versus postcards in terms of increasing response. Another special study involved telephone interviews with a subset of the sample members to determine the impact and effectiveness of the newsletter and possible ways of improving it. The final steps in data collection were the editing and coding of all returned questionnaires. This report contains descriptions and tabular summaries of these varied activities. The two attachments are copies of the mailout items and the report on the telephone survey of newsletter recipients.

Classification: Methodology (data collection procedures)

76

Kolstad, Andrew. *The national longitudinal study extract of the 1970 census school district data tape.* Washington, D.C.: National Center for Education Statistics, 1978.

This file contains base-year census-type demographic information on the school districts in which NLS high schools were located. The information in this file was extracted from NCES's 1970 Census Fourth Count (Population) School District data tape.

77
Levinsohn, J. *National Longitudinal Study of the High School Class of 1972: Special activity state survey and second level of edit activities.* Research Triangle Park, North Carolina: Research Triangle Institute, March 1976.

The special activity state survey described in this paper was designed to collect additional data from NLS sample members in an effort to obtain complete classifications for the 1972 and 1973 activity states and to obtain complete information on certain basic classifier variables. The second level of edit activities described in this paper were specific file editing tasks related to reformatting, recoding, or adding to certain sections of the 1975 NLS data base. The new data came from data collection and data processing activities that continued beyond the first follow-up cutoff dates. This consisted of the Special Activity State Questionnaire (ASQ) survey, processing additional School Record Information Forms (SRIF) and additional School Questionnaires (SQ), and creating new composite variables.

Classification: Methodology (data collection procedures)

78 ED 160 623, ED 160 624

Levinsohn, J., Henderson, L. B., Riccobono, J. A., & Moore, R. P. National longitudinal study base year, first, second, and third follow-up data file users manual (2 volumes). Research Triangle Park, North Carolina: Research Triangle Institute, January 1978. (Reprinted February 1979, U.S. Government Printing Office, Washington, D.C.)

The current NLS tapes contain base-year (1972) survey data, collected by the Educational Testing Service, integrated with first follow-up (1973), second follow-up (1974), and third follow-up (1976) survey data, collected by the Research Triangle Institute. This *Users Manual* provides a detailed description of the merged NLS data file available for use by the general research community. The purpose of this manual is to document the contents of the available tapes, and thereby enable the interested investigator to exploit effectively the research potential of the data.

Volume I includes sections on methodology, file preparation, contents and organization of the data file, technical organization of the data file, techinical specifications, and Appendixes A through J. Volume 2 includes Appendixes K through Q.

Classification: Methodology (variable and file construction)

79 ED 160 631
Levinsohn, J., & Lewis, L. *Base-year, first, and second follow-up master file documentation.* Research Triangle Park, North Carolina: Research Triangle Institute, August 1976.

This paper documents the contents of the 1976 NLS Master File. This file is similar in structure and content to the 1976 NLS Public Release File, differing only in the number of variables in the file. The Master File contains 1,669 variables while the Release File contains only 1,495 variables; the Release File is a subset of these 1,669 variables. The additional variables that make up the Master File are primarily drawn from the Student School Record Information Form (SRIF) and items that were withheld from the Public Release File for confidentiality reasons. The report is divided into two sections. Section 1 contains a summary listing of each variable contained in the file. This listing provides, for each variable, the variable number, a short label, the location of the implied decimal point (if blank, the variable is a whole number), the tape position, and a long label. This section should serve as a quick guide to the contents of the file. Section 2 presents a complete and detailed listing of the variables and variable frequency distributions in the data file.

Classification: Methodology (variable and file construction)

80 ED 151 371
Levinsohn, J. R., Lewis, L. H., Riccobono, J. A., & Moore, R. P. *Base-year, first, and second follow-up data file users manual.* Research Triangle Park, North Carolina: Research Triangle Institute, July 1976.

The *Users Manual* is a detailed description of the merged base-year, first and second follow-up NLS data file. The purpose of the manual is to document the contents of the available release tapes so that interested investigators in the general research community can exploit the data effectively. The manual has five parts: Introduction, Methodology, File Preparation, Contents and Organization of the Data File, and Technical Specifications. In Part 2, Methodology, the sample design, instruments, and data collection procedures are discussed. Part 3 describes first and second follow-up data preparation and entry, error and missing data codes, machine editing procedures, and quality and analytic indices. There are 23 appendixes.

Classification: Methodology (variable and file construction)

81
Levinsohn, J. R., & McAdams, K. C. *National longitudinal study: Third follow-up survey final*

methodological report. Research Triangle Park, North Carolina: Research Triangle Institute, August 1978.

This document is the formal report of activities during the third follow-up survey. As with prior follow-up survey reports, it is methodological, historical, and descriptive in nature, rather than analytical. The several reports of a more technical nature produced in conjunction with the third follow-up survey are listed and abstracted in Appendix A.

Classification: Methodology (sample design and effects, instrumentation, data collection procedures, weight calculation, variable and file construction)

82 ED 151 392

Levinsohn, J. R., & Riccobono, J. A. *A description of the merged base-year/first follow-up data file.* Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., 1975.

This paper provides a general description of the contents of the NLS tape package available for use by the general research community.

Classification: Methodology (variable and file construction)

83 ED 151 397

Levinsohn, J. R., Riccobono, J. A., & Moore, R. P. *Base-year and first follow up data file users manual.* Research Triangle Park, North Carolina: Research Triangle Institute, April 1975.

The *Users Manual* is a detailed description of the merged base-year/first follow-up NLS data file. The purpose of the manual is to document the contents of the available release tapes so that interested investigators in the general research community can exploit the data effectively. The manual has five parts: Introduction, Methodology, File Preparation, Contents and Organization of the Data File, and Technical Specifications. In Part 2, Methodology, the sample design, instruments, and data collection procedures are discussed. Part 3 describes first follow-up data preparation and entry, error and missing data codes, machine editing procedures, and quality and analytic indices. The appendices are:

A. Base-Year Student Questionnaire, and First Follow-Up Questionnaire (Form B)
B. Critical Items in the First Follow-Up Questionnaire
C. List of Occupational Codes
D.1 List of Field of Study Codes
D.2 List of License, Certificate, or Diploma Codes for First Follow-Up Question 43B
E. Routing Codes and Routing Patterns
F. NLS Release Tape Variable and Response Lists
G. List of Items Deleted from the SRIF, Base-Year, and First Follow-Up Instruments
H. Imputation of Grade Point Averages and Conversion of Grading System
I. List of Region Codes and States within Regions
J. Frequency Distributions for Base-Year and First Follow-Up Questionnaire Items

Classification: Methodology (variable and file construction)

84 ED 161 920

Lewis, L., & Levinsohn, J. *National longitudinal study of the high school class of 1972: School file documentation.* Research Triangle Park, North Carolina: Research Triangle Institute, August 1976.

This report describes the contents of the 1976 NLS school data file. The school file is a companion file to the student-based 1976 NLS Master File; it is composed of 1,318 school records, one record for each high school from which NLS students were sampled. The file contains information about the environment, staff, procedures, facilities, and curricula of the NLS sample high schools. The 500 variables that make up the file are primarily from the School Questionnaire and/or one or two Counselor Questionnaires for each of the 1,318 participating schools.

Classification: Methodology (variable and file construction)

85

Lyons, N. I., & Moore, R. P. *National longitudinal study of the high school class of 1972 technical report:* Reliability of retrospective data. Research Triangle Park, North Carolina: Research Triangle Institute, September 1976.

Of the 1,200 primary sample schools in the original NLS sample design, 231 did not participate in the base-year survey. The purpose of this study was to assess the reliability of base-year data obtained retrospectively during the first follow-up of students from nonparticipating schools. Limited base-year Student Questionnaire data were obtained during the first follow-up from a sample of the 1972 senior students from the participating schools. The study documented in this report is a question-by-question assessment of the reliability of the data obtained from these students. The resurvey procedure involved requesting information (i.e., 15 additional items in the First Follow-Up Questionnaire, Form B) from 500 base-year respondents and comparing the responses to the corresponding base-year items. The results and procedures are discussed.

Classification: Methodology (measurement property)

86 ED 170 301

Moore, R. P. *Calculation of nonresponse-adjusted student weights for respondents to the NLS base-year and first follow-up surveys.* Research Triangle Park, North Carolina: Research Triangle Institute, October 1975.

The report traces the activities which led to the development of the adjusted weights—beginning with the basic NLS design, the base-year weight calculations, and the resurvey procedures. Next, the report describes the first follow-up weight calculations (including unadjusted student weights), nonresponse adjustment methodology, classifier variables, weighting classes, and the adjusted weights calculations. The last pages contain tables showing the nonresponse adjustment factors for each weighting class as well as the total number of students, total number of responding students, sum of all unadjusted weights, and the sum of the respondent unadjusted weights for each weighting class.

Classification: Methodology (weight calculation)

87

Moore, R. P., & Shah, B. V. *Choosing the "optimum" design for an NLS cohort.* Research Triangle Park, North Carolina: Research Triangle Institute, 1975.

This is another version of the paper on "Efficiency Study of the NLS Sample Design."

Classification: Methodology (sample design and effects)

88 ED 167 567

Moore, R. P., & Shah, B. V. *Effects of stratification, clustering, and unequal weighting on the variances of NLS statistics.* Research Triangle Park, North Carolina: Research Triangle Institute, February 1975.

In this report, average design effects for statistics estimated from the base-year data are presented. Attempts to partition the effects into those due to stratification, clustering, and unequal weighting are discussed. The expected increases in subpopulation sample sizes due to oversampling are calculated and compared with the actual increases observed in the base-year survey. The effects on variances of oversampling and other factors which lead to unequal weighting are approximated and the optimum oversampling rates for several subpopulations are estimated. Several stratification variables are ranked from most to least effective in reducing the variances of survey estimates.

Classification: Methodology (sample design and effects)

89

Moore, R. P., & Shah, B. V. *Efficiency study of the change variables from the first follow-up of the NLS sample design.* Research Triangle Park, North Carolina: Research Triangle Institute, February 1976.

This design efficiency study seeks to determine the "optimum" number of schools and seniors per school to select in a two-stage design, so as to minimize the variance of new cohort statistics subject to likely budget constraints. The variables used in this analysis were defined as changes (or lack of changes) in the individuals' responses from the base-year survey to the first follow-up survey. Variance components were estimated for each of 14 change variables, and the efficiency of each of nine equal-cost sample designs was estimated for each of 238 statistics. The "optimum" design for each type of statistic was then chosen as the design with the highest average efficiency. This report documents the methods as well as the results of this efficiency study.

Classification: Methodology (sample design and effects)

90 ED 167 571

Moore, R. P., & Shah, B. V. *National longitudinal study of the high school class of 1972, sample design efficiency study: Optimal two-stage sample design* (NCES Publication 77-257). Washington, D.C.: U.S. Government Printing Office, 1977.

This investigation employs a cost-variance model which reflects costs not only for a base-year survey, but also for four follow-up surveys. Similarly, the variance component estimates are for variables describing changes in plans, attitudes, and activities over time.

The following major findings are presented:

(1) The "optimal" design for national statistics involves 12 sample students per school.

(2) The "optimal" designs for domain statistics involve 15 students per school for white students; 18 per school for blacks, other races,

males, and females; and from 21 to 27 per school for the domains defined by levels of father's education.

(3) The current NLS design with 18 students per school is perhaps the "optimal" overall design for all statistics.
(4) Designs with from 9 to 27 sample students per school all have high average efficiencies for both national and domain statistics.
(5) The criteria of maximum mean efficiency and minimum standard deviation of efficiencies appear to lead to the same "optimum" design choice.
(6) The ratios of the student component estimate to the sum of the school and student component estimates averaged approximately 98 percent for national statistics and 99 percent for domain statistics.

Classification: Methodology (sample design and effects)

91

Moore, R. P., Shah, B. V., & Folsom, R. E. *Efficiency study of NLS base-year design.* Research Triangle Park, North Carolina: Research Triangle Institute, November 1974.

Finding the optimal design involved a search for the numbers of sample schools and students that would maximize the variance at a given cost. The efficiency study of the NLS base-year design resulted in the selection of 21 variables, the estimation of 17 sets of variance components for each variable, and computation of the efficiency of these 357 statistics for each of nine designs of approximately equal cost to yield an optimal design for all statistics. The report of this study gives a detailed account of these activities and their results.

Classification: Methodology (sample design and effects)

92

Nisselson, H. *Sampling considerations in the design of LSEE.* Paper presented at the 140th meeting of the American Association for the Advancement of Science, San Francisco, California, March 1974.

This report describes the design and selection of the national probability sample of high school seniors. The descriptions include sample size, design approach, alternative school-based designs (sampling of schools, increasing the sampling of low-income seniors, sampling within schools), and impact of the sample design for analysis.

Classification: Methodology (sample design and effects)

93

Peng, S. S. *Imputation of the NLS ability index.* Research Triangle Park, North Carolina: Research Triangle Institute, October 1974.

This paper explores the feasibility of imputing aptitude scores through regression for about 7,000 NLS respondents who did not have aptitude test scores.

Several variables were selected from the base-year and the first follow-up student questionnaires for the imputation study: race, high school program, grades in high school, high school percentile rank, and planned level of educational attainment.

The regression analyses clearly show too much misclassification error, and the feasibility of imputing ability is questioned.

Classification: Methodology (imputation and analysis strategy)

94 ED 151 398

Peng, S. S., Bailey, J. P., Jr., & Dunteman, G. H. *Differences between high school graduates and dropouts in participation patterns and response quality in survey studies.* Research Triangle Park, North Carolina: Research Triangle Institute, February 1977.

A group of high school self-reported dropouts and a group of simulated high school dropouts were compared with graduates in their participation rates, efforts required for data collection, and the overall quality of their responses in a longitudinal survey. Results indicate that dropouts are less likely to return mail questionnaires; have lower retention rates in a longitudinal study; need more effort to trace their residence and to complete editing checks; and generally provide data of lower quality. Results also indicate that no substantial differences in data quality exist between those dropouts and graduates who were interviewed. It is thus suggested that the interview approach is preferable as far as data quality is concerned. A combination of mail survey, extensive editing phone calls, and interviews would also be advisable. In either case, questionnaires should be simple and straightforward. A complicated and lengthy questionnaire would probably discourage dropouts from completing the questionnaire.

Classification: Methodology (nonresponse bias)

95

Peng, S. S., & Jaffe, J. A. *Third follow-up survey composite variables.* Technical report, National Center for Education Statistics, Washington, D.C., March 1980.

This paper describes the development of composite variables which provide measures of some psychological traits and social behaviors for several sets of items included in the NLS Second and Third Follow-Up Questionnaires.

Analyses were performed on the selected item sets which were included in the second and/or third follow-up survey. Several other item sets were initially examined but proved to be unsatisfactory candidates for composite development because of low response frequencies and/or difficulties in obtaining appropriate tetrachoric correlations for dichotomous variables.

Fourteen composite variables were developed on the basis of alpha factor analysis. Their component items and internal consistency coefficients are summarized in this paper. Most of the composite variables have satisfactory reliability for statistical analyses, particularly in view of the fact that some composite variables are composed of only a few items. Ideally, all composites should have reliabilities of about .80 or above. Those with reliabilities less than .80 could be improved by adding additional items in future surveys or by improving item content.

Classification: Methodology (variable construction)

96

Rhett, H. *The National Longitudinal Study of the High School Class of 1972: Methods and problems in maximizing participation.* Paper presented at an American Educational Research Association symposium, New Orleans, Louisiana, February 1973.

This paper discusses problems in maximizing school participation. Problems include communication through the state coordinators and time schedule. A few recommendations are included for the conduct of any similar large-scale national sample study.

Classification: Methodology (data collection procedures)

97

Riccobono, J. A., Henderson, L. B., Burkheimer, G. J., Place, C., & Levinsohn, J. R. *National longitudinal survey: Base-Year (1972) through fourth follow-up (1979) data file users manual, Volumes I, II, and III.* Research Triangle Park, North Carolina: Research Triangle Institute, January 1981. (Draft)

The *Users Manual* is a detailed description of the merged base-year, first, second, third, and fourth follow-up NLS data file. The purpose of the manual is to document the contents of the available release tapes for interested investigators in the general research community to utilize the data effectively. The manual has five parts: Introduction, Methodology, File Preparation, Contents and Organization of the Data File, and Technical Specifications. In Part 2, Methodology, the sample design, instruments, and data collection procedures are discussed. Part 3 describes follow-up data preparation and entry, error, and missing data codes, machine editing procedures, quality indices and composite variables. In Part 4, file components are described as well as data availability. Part 5 presents recording specifications for the data file and processing suggestions. This *Users Manual* is bound in three volumes. Volume I contains Parts 1 through 5, appendixes containing instrumentation, critical item lists and lists of codes and response categories; Volume II includes appendixes with data processing and weighting information, created variable definitions, the Subject Keywork index and Alphabetic responses for the third and fourth follow-ups; and Volume III contains the codebook for the release tape, frequency distributions, and bibliography.

Classification: Methodology (variable and file construction)

98

Rizvi, M. H. *The third follow-up national longitudinal survey: an empirical investigation of item nonresponse adjustment procedures.* Adapted from Cox, B. G., & Folsom, R. E., Jr. (1979): An empirical investigation of item nonresponse adjustment procedures. Washington, D.C.: National Center for Education Statistics, July 1979.

This case study presents an empirical investigation of the nature of missing and faulty data and the efficacy of alternate item nonresponse adjustment procedures. The study was based upon the original responses to twenty critical items on the third follow-up NLS instrument. Since these critical items were subject to telephone follow-up to correct missing and faulty data, the bias resulting from nonresponse and response errors could be evaluated. Further, a hot deck procedure and a weighting class procedure for nonresponse imputation were tested on this experimental data set of original responses to the twenty critical items; the resulting estimates of means and proportions were compared with respect to their bias, variance and mean square error to the estimates obtained when no imputation or editing procedure is used.

Classification: Methodology (imputation and analysis strategies, nonresponse bias)

99 ED 133 334

Selby, D. *Item-nonresponse in the first follow-up* *survey of the National Longitudinal Survey of the High School Class of 1972* (EPRC for Higher Education and Society HEW Contract No. 300-76-0026). Washington, D.C.: Joseph Froomkin, Inc., May 1976.

This paper describes a variety of analytical difficulties facing prospective users of the first follow-up of the NCES NLS survey and suggests some possible approaches to coping with these.

The primary focus of this paper is on the causes and consequences of selective item nonresponse in the first follow-up survey. Coding schemes used to flag this nonresponse and alternative approaches to estimating values for missing data are discussed.

An examination of special codes used for routing-pattern errors and missing data leads the author to propose preparation of an analysis-oriented data file to parallel, but not replace, the existing documentary file. Certain coding modifications which might be implemented for such a file are mentioned.

An examination of patterns of item nonresponse leads to the conclusion that the questionnaire's content and format, especially requests for detailed and/or private information, complex routing patterns, and a layout better suited to personal interviews than to mail-out collection, are probably responsible for some item nonresponse. Possible modifications that might reduce item nonresponse in future follow-up surveys are suggested.

Review of several approaches to adjustment for missing data leads to the recommendation of a specific imputation procedure for data already collected. Some possible methodological studies aimed at testing the effects of data assignments upon characteristics of the present NLS data base are also described.

Classification: Methodology (variable and file construction)

100

Selby, D. *Tape record layout and related documentation for work file extract of NLS-1972 SFU master file* (EPRC for Higher Education and Society Contract No. 300-76-0026). Washington, D.C.: Joseph Froomkin, Inc., October 1978.

The work-file tape described here was drawn chiefly from an edited version of the Second Follow-Up Master File of the National Longitudinal Study of the High School Class of 1972. Selected data from sources external to the NLS master file have been added to the work file, using NLS variables as links.

The work file contains the records for 12,709 cases who were not enrolled in school in October 1974. Records for those who were enrolled or whose enrollment status could not be determined, are omitted.

The records have been sorted by DHEW administrative regions, as estimated from ZIP codes. The last variable in each record is the region code. Within each regional subgroup, cases are ordered as they were in the source file.

The work file contains 101 variables, many of which have been created from combinations of NLS-SFU Master File variables or added from external sources.

Appendix A, which is a record layout, lists variables in the work file sequentially, by variable number. The NLS-SFU Master File variable number (if any) is also given to permit cross-referencing. Other information includes the tape location, number of implied decimals (if any), a brief description of the variable, and applicable codes. Treatments of basic data are discussed in Appendix B.

Classification: Methodology (variable and file construction)

101

Shah, B. V., Hartwell, T. D., Rao, A. V., & Shirey, S. J. *Sycor (NLS) quality control—The second follow-up.* Research Triangle Park, North Carolina: Research Triangle Institute, September 1975.

This paper presents a procedure for quality control that would not be biased by the inaccuracies of a verification procedure.

The data from the first and second follow-up questionnaires of the National Longitudinal Study were keyed onto magnetic tapes using a direct data entry terminal.

The basic procedure was to select an unbiased sample of questionnaires and rekey them two additional times. A statistical analysis of the triplicate of each of the sample records was then performed to determine unbiased estimates of the error rate in the original keying of the data.

Records from questionnaires that had been rekeyed were compared variable-by-variable and character-by-character with the initially keyed record for the same questionnaire. This comparison was made by a computer program which identified the variables and characters that were not keyed exactly the same.

The sample of 3 percent was set initially to obtain more than 25 sample records per week and keep the additional cost of the rekeying effort to a reasonable magnitude. For NLS, the above sample size

provided good overall estimates as well as sufficient, continual monitoring of the quality of the keying operation.
Classification: Methodology (data collection procedures)

102
Shah, B. V., Holt, M. M. & Folsom, R. E. *Inferences about regression models.* Research Triangle Park, North Carolina: Research Triangle Institute, January 1981.

The purpose of this report is to review some appropriate available techniques that may be useful in applying regression models to the NLS data. The study provides a framework for evaluation and an appraisal of some alternate approaches within this framework. The preferred approach (combining the Horvitz-Thompson estimator and Taylorized deviation) is compared to an Ordinary Least Squares approach, through a simulation procedure using actual NLS data. Formulae underlying the preferred approach are provided separately in Appendixes A and B, and details of the development and use of a computer program to implement the approach are provided in Appendixes C and D.

This report has reviewed the available theories and has suggested a technique that will be useful in analyzing NLS data with respect to regression models. For drawing inferences, it is imperative that some estimate of the variance (mean square error) of the estimator be computed from the data. For a simple linear function (such as a total or mean) of the observations, it is possible to derive explicit algebraic expressions for estimating variances; however, it is not possible to obtain such explicit expressions for variance estimates of complex estimators such as regression coefficients. The approximation procedures considered were: (1) independent replications, (2) balanced repeated replications, (3) Jackknife, and (4) Taylorized deviations. The "Taylorized deviations" approach is preferred for the following reasons: (1) it is applicable to all designs and statistics; (2) it provides "good" answers for "large" samples; (3) it is economically and computationally feasible; and (4) it alone provides for estimation of variance components.

Since the applicability of the Taylorized deviations approach is based on asymptotic theory, its performance was evaluated empirically through simulation, using NLS data. Additional simulations using another large data set were also considered. Simulations were carried out using both Taylor Series Linearization (TSL), as defined in Appendix A, and Ordinary Least Squares (OLS). From a theoretical point of view, OLS is clearly inappropriate for drawing inferences from complex samples, assuming as it does simple random sampling; nonetheless, the technique was considered because it is so widely known and used (even when theoretically inappropriate) and is so easily applied through the more widely used statistical packages.
Classification: Methodology (imputation and analyses strategy)

103 ED 167 572
Shah, B. V., & Marnell, D. K. *Calculation of nonresponse-adjusted student weights for respondents to the NLS second follow-up survey.* Research Triangle Park, North Carolina: Research Triangle Institute, Statistical Science Group, January 1976.

The Sampling Department of the Statistics Research Division of RTI issued this technical report dealing with weighting adjustments for student nonresponse. The report describes the second follow-up weight calculations, nonresponse adjustment methodology, classifier variable data, procedure for forming weighting classes, and the adjusted student weight calculations. The last pages contain tables showing the nonresponse adjustment factors for each weighting class as well as the total number of students, total number of responding students, the sum of all unadjusted weights, and the sum of the respondent unadjusted weights for each weighting class.
Classification: Methodology (weight calculation)

104
Survey Operations Center. *Report on the data collection activities of the first follow-up: The national longitudinal study of the high school class of 1972.* Research Triangle Park, North Carolina: Research Triangle Institute, February 1974.

The NLS first follow-up data collection activities involved the mailout of a newsletter to all members of the sample, tracing activities for each individual whose newsletter was returned by the post office as undeliverable, questionnaire mailouts, mailout of reminder/thank-you postcards, and mailgram and telephone follow-up contacts with nonrespondents. In addition, a special study was conducted with a subset of the sample members to compare the effects of air mail and certified mail questionnaires, postcards, mailgrams, and telephone calls on the response rate. The final steps in data collection were the editing and coding of all returned questionnaires. This report contains descriptions and

tabular summaries of these varied activities. The four attachments are copies of the mailout items, the telephone tracing manual and related materials, an alternative plan for follow-up procedures, and a report on a special telephone survey of nonrespondents.
Classification: Methodology (data collection procedures)

105 ED 141 406
Tabler, K. A. *First follow-up survey design, instrument preparation, data collection, and file development.* Washington, D.C.: National Center for Education Statistics, 1977.

This report is a brief description of the activities involved in the collection and assembling of data for computer processing from the first follow-up survey of the National Longitudinal Study of the High School Class of 1972 (NLS). The survey was initiated in October 1973 with the mailing of a questionnaire followed by various reminder communications and tracing procedures. At the end of approximately three months, questionnaire data on the mail nonrespondents were, to the extent possible, obtained by personal interviews. The success of these efforts is attested to by the response rate of 93 percent.

The initial byproduct of the involvement of the NLS respondents is the conversion of their questionnaire responses and the development of a longitudinal data base for use by the many policymakers and researchers who will be needing and analyzing these and subsequent data collections for years to come. The process by which the study accomplished its objectives and succeeded in compiling the resultant data file is reported.
Classification: Methodology (data collection procedures)

106
Tabler, K. A., Berls, R., & Cornelson, L. *Philosophy of the design and development of the questionnaire.* Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., 1975.

This paper describes procedures used for developing the second follow-up instruments.
Classification: Methodology (instrumentation)

107
Tabler, K. A. & Schmidt, W. H. *Differences between early and late respondents to a mail survey and associated measures of data quality.* Handout for presentation at the 138th Annual Meeting of the American Statistical Association, San Diego, California, August 17, 1978.

This study was conducted in order to provide a description over time of the individuals responding by mail both in terms of their backgrounds and characteristics and the quality of the data they provide. Students who return their questionnaires by mail early are potentially different in background characteristics from those who respond much later in the mail cycle. Likewise, individuals who must be interviewed or those who do not respond at all can be described and compared with the mail respondents. Such results can provide a better understanding of the NLS data and also will aid in determining appropriate survey methodology for future surveys involving high school students.
Classification: Methodology (data collection procedures)

108 ED 167 570
Talbert, R. J. *National Longitudinal Study of the High School Class of 1972: Critical Data Base.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, May 1976.

The purpose of this paper is to identify a set of items which are considered indispensable or critical to the needs of most current and potential uses of the NLS data base. The major section of this paper describes the composition of the proposed critical data base and the procedures and criteria involved in its creation. The critical data base is defined in terms of the Base-Year, First, and Second Follow-Up Questionnaire items; the relationship of the planned third follow-up survey to these items is also discussed.
Classification: Methodology (variable and file construction)

109
Tenison, L. J. *Description and specifications for the linked NLS-institutional data base.* Washington, D.C.: College Entrance Examination Board, March 1976.

The NLS collected information from a sample student cohort including, among other items, the names of any postsecondary institutions applied to and/or attended during the first two years after high school. Using these names as a match key, a supplementary data file containing institutional information from four sources—1973-74 Higher Education Directory, the 1973-74 Tripartite Application Data File, the 1972-73 HEGIS Finance Survey and the 1972 ACE Institutional Characteristics File—has been created to link NLS student data with institutional data. Some important policy-related questions such as the manner in which different institutions package financial aid to the same student can be studied using the linked NLS-institutional data base.

Classification: Methodology (variable and file construction)

110

Westat, Inc. *Sample design for the selection of a sample of schools with twelfth-graders for longitudinal study.* Rockville, Maryland: Westat, Inc., June 1972.

This report describes the design and selection of a national probability sample of schools used in the National Longitudinal Study. Variables used for stratification were (1) control (public or private), (2) geographic distribution, (3) enrollment size class, (4) proximity to a public college or university, (5) percent minority, (6) income level of the community in which the school is located, and (7) degree of urbanization.

Classification: Methodology (sample design and effects)

111

Wiley, D. E. *Accuracy of estimates reported in high school learning, vocational tracking, and what then?* Evanston, Illinois: Northwestern University, July 4, 1980.

This paper is an assessment of the effects of sampling errors in the 1978 NLS Master File and their impact on tabulations related to the effects of race, sex, and high school program on high school experiences and subsequent educational and labor market participation. The purpose is to provide the necessary information to approximate the accuracy—in terms of standard errors—of estimates reported in *High School Learning, Vocational Tracking, and What Then?* (Wiley and Harnischfeger, 1980).

The study used a post-survey stratification of the sample based on sex (male, female), race (white, non-Hispanic, black, others) and high school program (academic, general, vocational), and all analyses were conducted using sample weights maximizing the number of cases having core base year data and responses to all three follow-ups. As all basic comparisons involved the race, sex, or high school program of survey respondents, the actual sample sizes for categories based on these factors are required for accuracy assessments.

Classification: Methodology (imputation and analyses strategy)

112

Williams, R. L. *The national longitudinal study: Estimated third follow-up survey design and associated sampling errors.* Research Triangle Park, North Carolina: Research Triangle Institute, October 1978.

To facilitate the use of the NLS results, RTI has conducted a general examination of the sampling variation associated with third follow-up (TFU) and TFU versus prior follow-up NLS survey statistics. This examination shows that naive sampling error estimates ignoring the NLS sample design structure will seriously underestimate sampling errors. It also demonstrates that a common multiplicative adjustment to the simple random sampling error estimate will adequately estimate the actual sampling error of NLS statistics.

In addition, for TFU proportions and TFU versus prior follow-up transition proportions, tables of approximate standard errors are provided. A table of approximate relative standard errors is also presented for TFU means as a joint function of the population coefficient of variation and sample sizes. Finally, for five composite scores, the mean difference and the standard error of the mean difference between a TFU score and a prior follow-up score are tabulated for 46 selected domains.

Classification: Methodology (sample design)

113 ED 161 918

Williams, S. R., & Folsom, R. E., Jr. *Bias resulting from nonresponse: Methodology findings (revised).* Technical report on national longitudinal study base-year estimates, Research Triangle Park, North Carolina: Research Triangle Institute, September 1976.

Approximately 20 percent of the initial sample schools did not participate in the NLS base-year survey. This school nonresponse rate was twice the student nonresponse rate in the participating schools. This paper presents methodology and detailed results of an investigation of the possible bias of school nonresponse in base-year estimates. Two methodologies developed expressly for this analysis and the basic statistics resulting from the method implemented are presented.

Classification: Methodology (nonresponse bias)

114

Wolfle, L. M. Unmeasured variables in path analysis. Virginia Polytechnic Institute and State University. Reprint from *Multiple Linear Regression Viewpoints,* Volume 9, Number 5, June 1979.

Structural equation models have been useful in estimating parameters of many substantive problems in educational research. Such models have been applied to study the effect of educational attainment. This author points out that many studies incorporating regression or structural equation procedures have rested upon the implicit, but unrealistic, assumption that the independent variables were measured without error. In practice, measurement errors in independent variables have been ignored, because it was felt that ignoring random measurement errors merely led to conclusions more conservative than would otherwise be the case. For example, it is well known that least-squares estimating procedures yield attenuated estimates of the regression slope and correlation coefficient in the bivariate case. Thus, it has been believed that such results understate the true relationships. In the case of multiple independent variables, however, the existence of measurement errors becomes a serious problem.

This paper first discusses a simple causal model, incorporating a single unmeasured variable for the purpose of exposition. A substantive example will follow, incorporating several unmeasured variables for which multiple indicators were available. This paper thus extends the work of Wolfle (1977) and Williams (1978), who provided introductions to the subject of path analysis from the perspective of regression analysis, Wolfle (1978), who exposited path analysis as a means of substantive interpretation of data, and Anderson (1978), who exposited a nonrecursive equation model.

Classification: Methodology (imputation and analysis strategy)

Military Service

115

Eisenman, R. L., Eitelberg, M. J., Purcell, A. C., Richmond, B. M., Wagner, C. L., & Hunter, R. W. *Educational benefits analysis—An examination of the effects of G.I. Bill educational benefits on service accessions.* Special report. Alexandria, Virginia: Human Resources Research Organization, November 1975.

The principal objectives of this study were (1) to examine the impact of terminating the G.I. Bill in respect to the number, quality, and representativeness of service accessions; and (2) to provide a means for measuring the relative costs and benefits of alternative educational programs which might be needed to sustain military strength in the event of G.I. Bill termination. Quantitative data came primarily from the Census Bureau, the National Longitudinal Study, Gilbert Youth Surveys, and Department of Defense Surveys.

Classification: Military service

116

Eitelberg, M. J. *Evaluation of Army Representation.* Final report. Alexandria, Virginia: Human Resources Research Organization, November 1976.

The National Longitudinal Study data were applied to a convergence/divergence model based on a review of the relevant literature. Standard statistical techniques were employed to examine the demographic, socioeconomic, and attitudinal measures of Army representation. Generally, the results of this evaluation show that Army entrants are not exceptionally divergent from their civilian counterparts.

Classification: Military service

117

Eitelberg, M. J. *Military representation: The theoretical and practical implications of population representation in the American armed forces.* Dissertation, New York University, 1979.

Military "representation"—that is, the microcosmic duplication of the general population and the variety of community interests in the armed forces—is an old idea, but a relatively new area of research and popular interest. The present study is therefore formulative or "exploratory" in scope; it involves the clarification of concepts, a census of problems and vital issues, a sifting of priorities, and the development of a framework for policy evaluation.

Expressions of concern regarding the social and ideological composition of the military are found to center on three subject areas: political legitimacy, military effectiveness, and social equity. Statements and interpretations of national "needs" are critically examined within the framework of these three policy themes. Equity considerations and racial minority participation, principal topics of present-day controversy, are highlighted. Representation statistics—obtained from the Department of Defense Master and Loss File of active-duty personnel, Bureau of the Census publications, Department of the Army surveys, and several other sources—are used to illustrate and discuss issues and arguments.

A conceptual model of military representation is developed in the effort to strike a reasonable balance between competing objectives and evaluative criteria. Through the Convergence/Divergence Model, the concept of "approximate representation" is introduced as a technique for achieving "balance."

Classification: Military service

118 ED 126 133

Purcell, A., Eisenman, R. L., Eitelberg, M. J., & Hicks, J. M. *Army representativeness: The National Longitudinal Study* (SR-ED75-25). Alexandria, Virginia: Human Resources Research Organization, January 1976.

This report provides graphical comparisons among four Army-relevant groups as to 13 indices of representativeness. The four groups break the 1972 high school seniors down according to whether or not they planned to enter the Army and again according to whether or not they had done so within 18 months. The 13 indices extend beyond such customary representation measures as race and sex to include family background, aspirations, interests, attitudes, and attitude changes.

The quantitative displays are assessed in relation to three categories of issues about representation—political legitimacy, social equity, and military effectiveness. This assessment is the first part of a systematic analysis leading to a plan for defining and achieving representation in the Army.

Classification: Military service

Personal, Career, or Psychological Development

119

Alexander, K. L., & Cook, M. A. The motivational relevance of educational plans: Questioning the conventional wisdom. *Social Psychology Quarterly*, 42, (3), 202-213, 1979. (NIE grant, NIE contract)

Employing two complementary data sets, the NLS and the Study of Academic Prediction and Growth, the authors questioned the conventional interpretation of educational plans as motives, and thereby as determinants of educational attainment. When questioned about their educational plans, (1) perhaps as many as 20% of youth supplied extemporaneous responses; (2) another 20% reported goals of recent formulation; and (3) the remainder reported long-term commitments (at least 2-5 years). The last are so longstanding as to make suspect the causal ordering employed in most models of adolescent attainment. That is, such plans are not properly considered as the products of high school experiences. Also documented was that senior year measures of educational goals often are quite contaminated by prior knowledge of one's actual prospects for college. The analyses question the assumptions, first, that educational plans are homogeneous in their information across students and assessments; and second, that plans reflect exclusively, or even primarily, underlying motivation or achievement orientation. Without these assumptions, it is difficult to sustain the customary interpretation of plans' "influences."

NLS data from the base-year and the first and second follow-ups were utilized to provide a valuable post high-school follow-up. The sample used in this report is limited to black and white respondents with the maximum effective base being approximately 14,500. (The differing sample sizes reflect missing data on particular items.)

Classification: Personal, career, or psychological development; postsecondary education (performance)

120

Allen, W. R. *Preludes to attainment: Race, sex, and student achievement orientations.* Chapel Hill North Carolina: University of North Carolina, March 1979. (Research supported by a Spencer Foundation "Young Scholars" grant)

This paper investigates race-sex differences in achievement orientation. Achievement orientation is approximated by attitudinal measures (educational expectations, occupational aspirations, academic self-concept, self-esteem, and locus-of-control) found to be correlated with expected and actual attainments. Three major groups of student background factors are related to achievement orientation: 1) family SES (parents' occupations, educations, income and oldest sibling's education), 2) school context (grades, peer plans and school academic climate), and 3) parental expectations (parents' educational aspirations for student and encouragement of college attendance).

Cross-classification analysis is used to test for significant race/sex differences in student levels of achievement orientation. Regression analysis is the technique used to test for significant race/sex differences in the processes which underlie the formation of student achievement orientations.

Race-sex comparisons of achievement orientation revealed several interesting, but few definitive differences. Occupational aspirations were a dimension of consistent differentiation, where whites and males aspired to higher status, less stereotypic occupations than did blacks and females. Pronounced interpersonal effects are implied throughout, with family educational attainments, peer plans, teacher evaluations (grades) and parent aspirations strongly influencing achievement orientations in all race-sex subgroups.

Classification: Personal, career, or psychological development

121

Briggs, Richard P., II. *Occupational values of adolescents.* Thesis, Emory University, Department of Sciology & Anthropology, 1978.

The association of adolescent's occupational values and father's occupational prestige and education was investigated using multiple regression techniques. Although it was found that the higher the father's prestige, the greater the probability of the adolescent exhibiting internal occupational values, the relation only accounted for a small amount of variation. The addition of the controls—race, sex, religion, and high school curriculum—only increased the amount of explained variation to 10.7 percent. It was concluded that the parents do not pass on their own occupational values to their children, and labor force participation does seem to be the major determinant of occupational values.

Classification: Personal, career, or psychological development

122 ED 151 386

Conger, A. J. *NLS: Group profiles on self-esteem, locus of control, and life goals.* Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., September 1976.

This paper presents differences in self-esteem, locus of control, and life goals (work-, family-, and community-orientations) among groups defined by basic classification variables (sex, race, SES, ability), and plan, activity, and transition variables. Results indicate that the orderings and differences in psychological attributes are relatively unchanged for basic classification groups. Results, however, indicate that subgroups that undergo the greatest changes in activities show more marked differences.

Classification: Personal, career, or pyschological development

123 ED 151 385

Conger, A. J., & Costanzo, P. R. *Implications of NLS data on self-esteem and locus of control for psychological research.* Paper presented at the annual meeting of the Southeastern Psychological Association, New Orleans, Louisiana, 1976.

The authors describe briefly the scope of the NLS survey, results on self-esteem and locus of control obtained from previous NLS data analysis, and current plans and issues which can be studied by using NLS data on self-esteem and locus of control. The focus of the presentation, however, is not on specific results or plans, but rather on indicating the potential benefits to psychologists and other interested investigators of using such data for confirming laboratory studies and generating further hypotheses.

Classification: Personal, career, or psychological development

124 ED 151 395

Conger, A. J., Peng, S. S., & Dunteman, G. H. *National Longitudinal Study of the High School Class of 1972: Group profiles on self-esteem, locus of control, and life goals.* Research Triangle Park, North Carolina: Research Triangle Institute, January 1976.

The purpose of this report is to use Base-Year and First Follow-Up Questionnaire data on self-esteem, locus of control, and work-, community-, and family-related goal activities to generate profiles for describing subpopulations defined by career patterns and demographic and personal characterisitcs. The following questions are addressed: (1) What base-year differences exist among subgroups and how are they related to school experience, career plans, and subsequent activities? (2) What subgroup differences exist at the time of the first follow-up, particularly among groups differing in post-high-school activities and transition state sequences? (3) How are the base-year to first follow-up changes in self-esteem, locus of control, and goal orientations related to changes in activities, transition sequences, and background variables? The answers to the questions are used for hypothesizing possible causal roles of the pyschological attributes and for describing the psychological status differences related to background and demographic variables and to transition sequences and activities. There are four major sections in this report. The data collection selection describes the sample, the survey instruments, the procedures, and the data processing. The measurement specifications section specifies the characteristics of the items and composite variables used as the psychological construct measures. Next, various group profiles are described and contrasted. Finally, there is a summary of the important findings and their implications. The appendixes contain means, standard deviations, subgroup sample sizes, and generalized standard errors.

Classification: Personal, career, or psychological development

125 ED 117 155

Fetters, W. B. *Change in attitudes one and one-half years after graduation* (NCES 76-227). Washington, D.C.: U.S. Government Printing Office, 1975.

This report describes the changes of high school graduates during a period of about one and one-half years with regard to their views of themselves, sense of control of their environment, and their orienta-

tion toward work, community, and family goals. Change percentage points are presented for the population as a whole, and for groups classified by sex, race, SES, academic ability, high school program, and geographic region.
Classification: Personal, career, or psychological development

126
Gruber, J. E. *Factors influencing the self-esteem and locus of control of adolescents: Results from the NLS first year follow-up.* Unpublished doctoral dissertation, University of North Carolina, Chapel Hill, North Carolina, 1976.

This study investigates the differences in self-esteem and locus of control among adolescents at two points in time: their senior year in high school (spring 1972) and a year and a half after high school graduation (October 1973). These differences were analyzed within four race-by-sex groups: black males and females and white males and females.

Results indicate that high school blacks have higher self-esteem but lower locus of control than whites, and women have lower self-esteem but higher locus of control than men. After high school, whites generally increase while blacks decrease in self-esteem regardless of their post-high-school status.
Classification: Personal, career, or psychological development

127
Gruber, J. E. *Self in transition: Change and continuity in self-esteem after high school.* Palo Alto, California: R & E Research Associates, 1979.

The major purpose of this study is to analyze differences between and changes in the self conceptions of four categories of adolescents (blacks and whites of both sexes) as they make the transition from the high school student role to other roles and statuses (college, civilian employment, etc.).

A general model which encompasses all the variables is presented in Chapter 1. The next chapter gives the research design and variable measurement for this study. Chapter 3 gives a critical overview of the literature on self esteem, and presents the models of analysis used in subsequent chapters. Chapter 4 presents the analysis of high school self esteem, employing the background and school-related factors. Chapter 5 looks at the changes in self esteem of various types of persons after they leave high school. Chapter 6 analyzes differences in self esteem among students who are continuing their education. Finally, Chapter 7 studies self-esteem differences among members of the civilian labor force.
Classification: Personal, career, or psychological development

128
Holsinger, D. B., & Flores, E. Y. *School to work transition profiles of Anglo and Mexican American high school graduates in the southwest: A study of the high school class of 1972.* Tucson, Arizona: The University of Arizona, 1977. (Prepared for the Employment and Training Administration, U.S. Department of Labor, under Research and Development Grant No. 21-04-77-31)

This study analyzes a subsample of Mexican American and Anglo males and females from three waves of the National Longitudinal Study (NLS) of the High School Class of 1972. Using descriptive and associated statistics, these data are examined in order to help conceptualize and describe the process of career formation of Mexican American and Anglo youth. Post graduation activity-states were identified, and individuals were coded into transition groups to determine the difference which such profiles made in the level of occupational aspiration and income after four years.

The authors describe the post graduation plans and rates of plan fulfillment among Mexican-American and Anglo student subsamples. All females have higher occupational aspirations than males; and Anglos, as a subgroup, have higher aspirations than Mexican-Americans.

Forty-seven distinct profile sequences were identified and the characteristics of each were elaborately described. Profiles were found to have distinct levels of job aspirations and were further distinguishable in terms of the ethnic and sex compositions of their incumbents. Mexican-American students were infrequently found in profiles involving four-year colleges and disproportionately in work-related profiles, including "laid-off." Traditional academic indicators, when used to describe the profiles, predict negatively to income and positively to level of occupational aspiration. There is a trade-off between gratification of income requirements and additional schooling.
Classification: Personal, career, or psychological development

129
Holsinger, D. B., & Flores, E. Y. Post high school plans of Mexican-American and Anglo youth. Tucson, Arizona: The University of Arizona, Department of Educational Foundations and

Administration, November 1980. (Based on a report prepared for the Employment and Training Administration, U.S. Department of Labor, under a research and development grant)

The study entails an analysis of a subsample of Mexican-American and Anglo males and females from three waves of the NLS. Using descriptive and associational statistics, NLS data were examined in order to help conceptualize and describe the process of plan formation and plan implementation of Mexican-American and Anglo youth. Females had higher occupational aspirations than males and Anglos' aspirations were higher than those of the Mexican-Americans.

Classification: Personal, career, or psychological development; postsecondary education (access: race and sex differences)

130

Kanouse, D. E., Haggstrom, G. W., Blaschke, T. J., Kahan, J. P., Lisowski, W., & Morrison, P. A. *Effects of Postsecondary Experiences on Aspirations, Attitudes, and Self-Conceptions.* Santa Monica, California: The Rand Corporation, April 1980.

The purpose of this study is to examine the effects of various postsecondary choices on short-range outcomes associated with the development of aspirations, attitudes, and self-conceptions. These outcomes include self-esteem, locus of control, value orientations, sex-role attitudes, expected educational attainment, career aspirations and satisfaction with career progress. To determine the effects of postsecondary choices of these outcomes, the authors compare groups that entered various postsecondary "tracks" following high school graduation: continued education (four-year college, community college, or vocational-technical school); entry into the civilian labor force (full-time or part-time); military service; full-time homemaking; and unemployment.

The NLS base year study and the follow-up surveys in 1973, 1974, and 1976 were the source of data for this study.

The main finding of the study is that the initial differences between young people who enter various postsecondary tracks are generally much greater than relative changes that emerge thereafter. The finding holds even after controlling for numerous background variables. A conclusion is that differences in the typical experiences that young people have in various postsecondary activities do not, in general, have as great an effect on their attitudes and aspirations as the factors that led up to their initial choices.

Classification: Personal, career, and psychological development

131

Kominski, R. *Patterns of change in occupational aspirations.* Unpublished paper, Univeristy of Wisconsin, Madison, Wisconsin, Fall 1978.

This study looks at the change in occupational aspirations over a four-year period for a group of young adults following high school departure.

The model that we have fit to a set of occupational aspirations does not provide a clear-cut picture of the patterns of change. Several basic, tentative conclusions about the relationships going on in the data are as follows:

(1) The effect of sex, particularly in moving women into aspirations of homemaker, is quite strong. Another strong sex-related effect is the movement of men into military aspirations.

(2) Effects of primary activity, particularly for homemakers and military personnel, tend to reinforce desire for these positions; poor success on the job market lowers aspirations, while full-time school attendance maintains aspirations and keeps them stable.

(3) Effects of low and moderate SES appear to direct individuals into military and homemaker aspirations; high-SES individuals are more likely to remain stable, or modify downward to another occupation.

(4) Race differences, in general, do not appear to be great. The major exception to this appears to be low-SES nonwhite males who have not been engaged in any primary activity.

The elimination of certain NLS respondents that have missing data on any of the independent variables or that are missing data for base-year or first follow-up with respect to occupational aspirations results in a sample of 21,261 for this research.

Classification: Personal, career, or psychological development

132

National Center for Education Statistics. Continuing assessment of the occupational goals of the high school class of 1972. *Advance Statistics for Management Bulletin,* No. 26. Washington, D.C.: National Center for Education Statistics, September 1977.

This bulletin presents data from the NLS second follow-up which suggest that on the average, young adults two and one-half years after high school graduation had not drastically changed their occupational goals from what they were in high school.

Findings revealed the dramatic difference between the U.S. Department of Labor projections for labor force needs at the time these graduates are 30 and the distribution of their goals. Large differences existed in the occupational goals of women and men which also were contrary to traditional expectations.

Classification: Personal, career, or psychological development

133 ED 163 575

Nolfi, G. J., Fuller, W. C., Corazzini, A. J., Epstein, W. H., Freeman, R. B., Manski, C. F., Nelson, V. I., & Wise, D. A. *Experiences of recent high school graduates: The transition to work or postsecondary education.* Lexington, Massachusetts: Lexington Books, 1978.

This report has five main sections. The initial section is an Executive Summary containing an overview of the entire report. Part One consists of a general analysis of actual post-high school experiences of the class of 1972. Labor market oriented analysis is presented in Part Two, followed by Part Three which focuses on the development of a model to simulate the demand for higher education. Part Four analyzes secondary and postsecondary vocational education; the strategy of institutional aid and its implications for the effectiveness of public policy implementation are also examined.

The report describes several key empirical findings about the transition of youths into school or work. The authors have advanced the areas of analytic methodology in several crucial respects and laid the groundwork for future analysis.

Classification: Personal, career, or psychological development; postsecondary education (vocational education)

134

Peng, S. S., & Talbert, R. J. *Sex differences in career orientations.* Paper presented at American Educational Research Association, Toronto, March 1978.

This study is based on NLS participants who entered a two- or four-year institution by Fall of 1972 (4,747 men and 4,525 women). The differences between men and women in career orientations have not changed over the years. The proportions for each have risen comparably, seeming to reflect the job market. However, women still dominate the fields of education, humanities, and fine arts, while there are still more men in biology, business, engineering, and physical science.

The purpose of this paper is to examine sex differences in career orientations, as measured by college majors, and to compare the situation today to what it was over a decade ago.

Simple correlations of predictor variables such as socioeconomic status and academic ability with sex and college major were presented. Results suggest that after background variables are considered, women are still less likely than men to enter certain fields. Since math scores and high school curriculum have a significant relationship to field choice, women are less prepared because they take fewer math and science courses in high school. It is interesting to note that socioeconomic background is not an important variable in choice of male-dominated fields for men or women.

Classification: Personal, career, or psychological development

Postsecondary Education

135

Anderson, K. L. *The effects of post-high school experiences on the persistence of college students.* Unpublished doctoral dissertation, University of North Carolina, Chapel Hill, North Carolina, December 1978.

This study examines differences in levels of educational attainment between two- and four-year college entrants in the National Longitudinal Study. Lower-level educational outcomes were documented for two-year college students, despite high educational aspirations of most junior and community college entrants at the time of enrollment. The paper explores these phenomena by regression analysis, comparing educational outcomes for two- and four-year college students in relation to ability, social class, previous academic experiences and performance, and values and attitudes.

Results support the influence of background variables; but evidence also suggests that, even controlling for these variables, two-year college entrants have a higher probability of dropping out, and a lower probability of getting a four-year degree than their peers in four-year colleges.

Classification: Postsecondary education (performance)

136

Anderson, K. L. Post-high school experiences and college attrition. *Sociology of Education,* 54, January 1981.

While most studies of college attrition have focused on students' social and academic background as predictors, this study investigated the consequences of the social contexts and experiences of students after they have entered college.

The study used data from the National Longitudinal Study (NLS) of the high school class of 1972. This study proposes a causal model, drawn from work on status attainment processes and college attrition, to examine the consequences of the type of college entered on student educational outcomes for a sample of 1972 college entrants. It was found that students who entered two-year community/junior colleges, who were employed (unless in work-status positions), and who lived off campus but not with their parents, were more likely to drop out in both the first and the second years of college than were other students. The indirect effects of these social contexts through differential academic performance, academic and social integration, peer attitudes toward college, and achievement goals were also explored in an attempt to more fully understand these structural effects.
Classification: Postsecondary education (performance)

137 ED 146 771
Bailey, J. P., Jr. *The national longitudinal study of the high school class of 1972 symposium: Trends in postsecondary education.* Paper presented at the annual meeting of the American Educational Research Association, New York, New York, April 1977.

This document is a collection of papers presented at the April 1977 Annual Meeting of the American Educational Research Association in New York City. It includes an overview by Dr. Bailey, which briefly describes the NLS. These papers are included in this document:

(1) Entry into Postsecondary Education,
(2) College Student Withdrawal: A Motivational Problem,
(3) Transfers Among Postsecondary Education Institutions, and
(4) Impact of Financial Aid on Postsecondary Entrance and Persistence.

Discussants' comments about the papers are also included.
Classification: Postsecondary education (access: financial aid, performance)

138 ED 146 871
Bailey, J. P., Jr., & Collins, E. F. *Entry into postsecondary education.* Paper presented at the annual meeting of the American Educational Research Association, New York, April 1977.

This analysis examines the current patterns of entry to postsecondary education. The differences in entry rates between subgroups defined by sex, race, socioeconomic status (SES), and academic ability are described and discussed in reference to previous findings. Results indicate that there are sex, SES, and ability differences in entry rates, and that racial differences in entry rates can be explained largely on the basis of differences in academic ability among the racial groups. It was noted that while high ability blacks seem to be able to enter higher selectivity schools, the majority of blacks attend lower selectivity schools. Within this context, it was concluded that some progress in achieving equality of educational opportunity has been made.
Classification: Postsecondary education (access)

139 ED 146 771
Bailey, J. P., Jr., Symposium Organizer. *National longitudinal study of the high school class of 1972 symposium: Trends in postsecondary education.* Papers presented at the annual meeting of the American Educational Research Association, New York, New York, April 1977.

This document is a collection of papers presented at the April 1977 annual meeting of the American Educational Research Association in New York City. It includes an overview by Dr. Bailey, which briefly describes the NLS. Papers included in the document are:

(1) Entry into Postsecondary Education. Bailey & Collins, ED 146 871;
(2) College Student Withdrawal: A Motivational Problem. Peng & Fetters, ED 148 206;
(3) Transfers Among Postsecondary Education Institutions. Dunteman & Peng, ED 146 870;
(4) Impact of Financial Aid on Postsecondary Entrance and Persistence. Corrallo & Davis, ED 146 869.

Discussants' comments about the papers are also included.
Classification: Postsecondary education (access: financial aid, performance)

140
Barnes, G. T., & Neufeld, J. L. The predictability of college financial aid offers: Evidence from the class of 1972. *Economic Inquiry,* Volume 18, Number 4, October 1980.

In this study, the authors examine the issue of whether or not undergraduate student financial aid is in fact based on financial need and is predictable. They estimated a two-stage aid predictor model with a single-stage Tobit predictor used as a check. Results strongly suggest that aid offers made by institutions are quite unpredictable, and that measures of financial need are only weakly related to both the likelihood of a student's receiving an aid offer and the size of aid once offered. Such a finding has negative implications for the efficiency of the process by which students search for a college to attend. Also, evidence was found that aid officers exercise considerable discretion by making awards on the basis of student characteristics other than financial need.

The paper is organized into a discussion of the financial aid award process, a review of two previous studies, a description of the model, data and estimation procedure used, and a presentation and analysis of statistical findings.
Classification: Postsecondary education (access: financial aid)

141
Bethune, S. B. *Factors related to entry to the teaching occupation: The choice of education as a field of study, a preliminary analysis.* Chapel Hill, North Carolina: University of North Carolina, December 1978.

This study examines characeristics and experiences of students choosing education as a major field of study in college. From the NLS sample, 1,071 students were identified as education majors. This group was examined in terms of SES, race, academic achievement, creativity, materialism, people-orientation, high school experiences, influence of friends and relatives, and the time of choice of the field of education.

Results suggest that the study of education tends to attract students who rank lower in academic performance and SES than do other fields; and that students who value working with people are more likely to choose education as a major and to make this choice early in their college years.
Classification: Postsecondary education (performance); personal, career, or psychological development.

142
Bowers, W. J., Pierce, G. L., Blitch, C., & Carr, A. *Access to postsecondary education.* Final report, Boston, Massachusetts: Northeastern University, Russell B. Stearns Center for Applied Social Research, 1977. (Draft)

The purpose of this report is to evaluate access to postsecondary resources and opportunities among young people from various social backgrounds. The analysis was conducted within the framework of a short-term postsecondary educational attendance model that incorporates factors affecting the decision to enroll in postsecondary education and the ability to carry out this decision.

The most consistent and pervasive effect uncovered among access variables is the tendency for general and vocational high school curriculums to impede postsecondary attendance. Others' findings include that among the strongest interest and inference factors affecting postsecondary attendance are the influences of significant others and that high school counseling programs show only slight and restricted effects on postsecondary attendance, little denial of access to postsecondary education can be attributed to lack of financial resources. Access inequalities uncovered are: (1) the academic preparation disadvantage of blacks; and (2) social influence disadvantage of females and youngsters with not-so-well-educated parents.
Classification: Postsecondary education (access)

143
Brown, K. G. *Student loans: A multivariate analysis of planners, users, and non-users.* Doctoral dissertation, Tucson, Arizona, May 1980.

The purpose of this paper is to investigate the financial-aid plans of high school seniors and assess the likelihood of realization of these plans in the first year of postsecondary schooling. Additionally, the persistence status of students in several financial aid groups was examined in detail. Differences in SES, ability, and type of school were analyzed using multivariate statistical techniques for students planning various types of aid and for students planning various types of loans.

The analysis in this paper showed that students planning to use loans had significantly lower SES than those not planning loans. Further, when first-year loan users are compared, larger percentages of low SES students were using loans than students in the upper three quartiles. Additionally, the results of the analysis of the impact of financial aid for other groups (vocational students, dropouts) is presented and implications for financial aid policies are discussed.

NLS data from the base year through third follow-up were used in this study (1972-1976).
Classification: Postsecondary education (access: financial aid)

144
Burkheimer, G. J., Jaffe, J. A., & Peng, S. S. *Highly able students who did not go to college.* Research Triangle Park, North Carolina: Research Triangle Institute, November 1980. (NCES under Contract No. OEC-0-73-6666)

Recent surveys indicate that a seemingly large proportion of students in the top ability quartile of their high school graduation class do not attend college. Due to the implication of this talent loss, at both the individual and national level, this study was initiated in an attempt to discover factors related to college attendance by able students and to see how these students fare in the world of work if they do not attend college. For comparison, low and middle ability groups were also considered.

In modelling college attendance, the major constructs considered were individual and family background factors, high school academic credentials, educational expectations, life goals, and early marriage. Of these constructs, only the life goals variable set (as measured by three fairly weak scales) failed to show a unique relationship to college attendance at all ability levels. For the remaining constructs, the factors related to college attendance for highly able students were generally similar to and directionally consistent with those for other ability groups.

One interesting finding was that low educational expectation was the strongest unique predictor of college nonentry at all ability levels, but was markedly less predictive for low ability students than for the high or middle ability groups. Also, early marriage was strongly related to not attending college, and the effect was about twice as large for the highly able than at other ability levels.

Highly able students not attending college had married at about twice the rate and had become parents at about five times the rate of their college-going counterparts.

Classification: Postsecondary education (access); secondary education (student characteristics)

145

Catsiapis, G. C. & Petersen, D. L. *An empirical analysis of the determinants of parental contributions for postsecondary education.* (Contract No. 300-78-0086 with the U.S. Department of Health, Education, and Welfare) 1978.

The approach taken in this study views the parental financial contribution towards their children's postsecondary education as a transfer (gift). Theoretical considerations suggest a set of variables that are relevant for explaining the magnitude of parental contributions. The magnitude of the effect of each variable is determined empirically so as to reflect actual behavior of parents. The results show that parental contributions vary with factors not taken into account by the federal student-aid programs and that parents respond to increases in student aid by reducing their contributions.

The results can be used to predict the "expected parental contribution" for each high school graduate.

Estimation results are reported separately for each data set for the purpose of making comparisons. Data for 22,625 individuals from the NLS base-year and three follow-up surveys were utilized.

Classification: Postsecondary education (access: financial aid)

146

Clowes, D. A., & Levin, B. H. How do two year colleges serve recent high school graduates? *Community College Review, 7*(3), 24-35, 1980.

This study used NLS data to explore patterns of postsecondary schooling. Educational aspirations for the entire sample were tabulated and the possibility of variant educational aspirations by race was explored. Patterns of attendance at two- and four-year colleges were identified using status (SES), aptitude and race as variables of interest. Finally, patterns of educational achievement were identified using educational attainment, race, and type of college first attended; the patterns identified were then checked for the effect of status and aptitude.

Substantially more students (50 percent) nationally aspire to a four-year than to a two-year college (12 percent). And, nationally, there is no significant difference in educational aspirations of blacks and whites. Few low status or low aptitude students attend college; middle status or aptitude students are more likely to attend a two-year college, and high status or aptitude students are more likely to attend a four-year college. Blacks are more likely to attend four-year colleges.

Sixty percent of all students who aspire to a two-year degree and attend a two-year college complete two years of college and receive an associate degree irrespective of race. A subsequent study of curriculum choices among this sample would provide useful information in interpreting this finding.

This study suggests that attendance at a two-year college for recent high school graduates reduces the likelihood of attaining a bachelor's degree. The limited number of blacks in the sample prevents concluding that blacks would be better served by attending two-year colleges. Further study of the types of two- and four-year colleges attended by blacks, the curricula studied, and the support services offered was recommended, as was the study of the role of the primarily black four-year colleges in producing black graduates.

Classification: Postsecondary education (access: basic patterns of attendance performance)

147 ED 146 869

Corrallo, S. B., & Davis, J. A. *Impact of financial* *aid on postsecondary entry and persistence.* Paper presented at the annual meeting of the American Educational Research Association, New York, April 1977.

The impact of financial aid, particularly from federal sources, on the entrance to and persistence in postsecondary education is examined within the context of family income levels, ability, race, sex, and kind and cost of PSE institution entered. Results indicate that college-going, particularly for entrants into four-year institutions, is still related to family imcome level, but that financial aid tends to equalize "net price" to students (with net price the difference between total cost less family contribution and grant aid), while family contributions vary as expected as a function of family income.

Classification: Postsecondary education (access: financial aid, performance)

148

Crary, L. J., & Leslie, L. L. The private costs of postsecondary education. *Journal of Education Finance,* 14-28, Summer 1978.

The goal of this paper is to provide empirical, relatively assumption-free, estimates of the private costs of participating in postsecondary education.

The data base used permitted income comparisons of reasonably homogeneous groups of young adults. Of the commonly accepted direct cost categories, such as tuition, fees, books, supplies, transportation, and additional living expenses ascribable to higher education, only the first four are available from the NLS data. Data describing private, indirect costs (foregone earnings) for college freshman and sophomores are presented.

Assuming that these NLS cost patterns generally hold for juniors and seniors, it was observed that previous estimating methods reviewed in the study result in private cost figures borne by students and their families are too high. Perhaps the most important implication of this finding is that the rates of return on the college investment may be considerably higher than some have estimated; thus, the investment may be more rational economically than some previous assumptions would have allowed.

Setting aside the question of relative benefits, it would appear on the basis of relative costs that at all SES levels, postsecondary attendance generally makes much more sense for high ability youth than it does for low ability youth. A final observation is that previous estimates of the portion of the total costs of higher education borne by students and their families may be too high.

Further, refinements of these findings will be possible when the NLS junior and senior year data are explored. With this information it will be possible to complete the private cost estimates of postsecondary education.

Classification: Postsecondary education (access: financial aid)

149 ED 139 844

Creech, F. R., Freeberg, N. E., Rock, D. A., Wilson, K. M., & Young, K. *Comparative analysis of postsecondary occupational and educational outcomes for the high school class of 1972.* Executive summary, Educational Testing Service: Princeton, New Jersey, May 1977.

This study examines the educational and occupational decisions made by vocational education students during the period between the base-year and first-year follow-up data collections. The study examines career and employment patterns in the year immediately following the completion of secondary education and the factors which affected the career patterns of these youth. Several analyses were performed to explain the causal relationship, if any, between career decisions and hereditary and environmental variables (race, sex, school location, SES, etc.). These analyses were compared with data for both academic and general curriculum students to determine the differential effects or impacts of the different educational experiences.

Classification: Postsecondary education (vocational-technical)

150

Doermann, H. *The future market for college education.* Paper presented at the Colloquium on College Admissions, Fontana, Wisconsin, May 1976.

This paper describes annual crops of high school graduates in selected years from 1964 to the present and then projects ahead to 1984. Those high school graduates who go on to postsecondary education within 18 months and those who do not are derived by using the NLS October 1973 follow-up questionnaire. The study discusses constraints and opportunities in student recruitment caused by the shape and size of this traditional market for college education. Colleges will seek to broaden their own effective pools of applicants. The general pressures of study or declining enrollment will place individual colleges under strains they were not designed for. The principal casualty is most likely to be the capacity of these institutions to adapt and to preserve vitality. Three appendices are included.

Classification: Postsecondary education (access: financial aid)

151

Dresch, S. P. *Studies of the impact of student financial aid program, Study B: Impact of student aid and labor market conditions on access to postsecondary education.* New Haven, Connecticut: Institute for Demographic and Economic Studies, Inc., August 1975. (Abstract)

This substudy is part of a two and one-half year study, Impact of Student Aid and Labor Market Conditions on Access to Postsecondary Education, being conducted by the Higher Education Research Institute and supported by the Office of Planning, Budgeting, and Evaluation of the U.S. Office of Education (Contract Number 300-75-0382). NLS data will be used along with data from the ACT survey of 1972-73 high school juniors and the ETS Preliminary Scholastic Aptitude Test-National Merit Scholarship Qualifying Test (PSAT-NMSAT) norming sample of 1974-75 high school juniors to identify the consequences of changes in national and local labor market conditions, in financial aid availability, and in other aspects of policymakers to anticipate more accurately the consequences of alternative public policies under the changing economic conditions which will characterize the future.

Classification: Postsecondary education (access: financial aid)

152

Dunteman, G. H., & Peng, S. S. *National Longitudinal Study of the High School Class of 1972: Planning and activity states analyses.* Research Triangle Park, North Carolina: Research Triangle Institute, September 1975.

This report presents basic descriptive analyses of the planning and activity states of the NLS sample members. The central theme deals with the following questions: (1) What were the young people's plans shortly before graduation from high school? (2) What were they doing shortly after graduation? (3) How many of them fulfilled their plans? (4) What were they doing one and one-half years after graduation? (5) How many changed from one activity to another? Findings from several descriptive longitudinal and cross-sectional analyses of base-year and first follow-up data give insights into these questions. Three appendixes cover specification and use of planning and activity state variables, sampling variability, and plans and activities for respondents excluded from planning state analyses.

Classification: Postsecondary education (access); labor force participation

153 ED 146 870 Higher Education

Dunteman, G. H., & Peng, S. S. *Transfers among postsecondary education institutions.* Paper presented at the annual meeting of the American Educational Research Association, New York, New York, April 1977.

The issues covered in this report include the extent of transferring, factors related to transferring, and differences between the four-year college presisters and those who transferred from two-year colleges. Four types of transfer students are examined in relation to the issues: Those students transferring from a four-year institution to another four-year institution, those transferring from a two-year institution to a four-year institution, those transferring from a two-year institution to another two-year institution and those transferring from a four-year institution to a two-year institution. Major findings include: (1) one-fourth of the two-year college students transfer to four-year institutions, and 19 percent of the four-year college students move to other colleges two years after initial matriculation; (2) men do not have a higher two-year to four-year institution transfer rate than women; and (3) the four-year to four-year institution transfers generally have higher SES and achievement scores than persisters. In view of increasing numbers of transfer students, it is recommended that future studies try to identify transfer students' problems in the areas of adjustment to new environments, selection of colleges, and refinement of career plans.

Classification: Postsecondary education (performance)

154

Dunteman, G. H., Wisenbaker, J., & Taylor, M. E. *Race and sex differences in college science program participation.* Research Triangle Park, North Carolina: Research Triangle Institute, May 1979.

The primary purpose of this study is to explain the relatively low entry rate of females and blacks into college science curricula. A subsidiary and related purpose of the study is to explain the relatively low science degree attainment of females and blacks. The data base used in modeling sex and race effects on choosing a science major and science degree attainment is the NLS.

The data indicated that there were greater sex differences than differences between blacks and whites in the probability of selecting a freshman science major. Black females had about the same probability as white females in selecting a hard science major. On the other hand, black males compared to white males had a consistently lower probability of entering each specific science major group. Path analysis models were developed which had four key intervening variables: mathematics ability, thing orientation, perceived mother's educational aspirations for child, and number high school science semesters. These four intervening variables explained some of the negative indirect effects of race and sex on the selection of a college science major. The most significant finding was a substantial positive direct effect of being black and substantial negative effect of being female on selecting a college science major.

Classification: Postsecondary education (performance), personal, career, and psychological development

155

Eckland, B. K. Sociodemographic implications of minimum competency testing. Prepared for *Minimum Competency Achievement Testing: Motives, Models, Measures and Consequences*, R. M. Jaeger and C. K. Tittle, (Eds.) Berkeley, California: McCutchen Publishing Company, 1979.

This study examines the correlation between success on minimum compentency tests and success in life, as measured by access to jobs and college. Data from the NLS were used; scores on the base-year ability test battery were considered equivalent to most high school competency tests for the purposes of the study, due to measurement of the same basic skills—mathematics, reading comprehension, and vocabulary.

Employment and wage statistics obtained from NLS sample members who did not attend college were compared to ability test scores. Test scores were found to be of little value in predicting success of this group, or of subgroups by race. The possession of a diploma, regardless of level of academic performance, appeared to be a far more important factor in determining this group's success in work.

A second comparison examined postsecondary experiences of NLS sample members who did attend college. A high correlation was found between ability test scores and college attendance, and therefore, upon socioeconomic attainment in the long run. Actual employment data for this group, many of whom are still in college at the time of the third follow-up, were inadequate for this study.

Conclusions indicate that the usefulness of competency test scores lies in making the high school diploma a more meaningful credential.

Classification: Postsecondary education (access, performance); methodology (measurement property); labor force participation

156

Eckland, B. K., & Henderson, L. B. *College attainment four years after high school.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, January 1981. (Draft)

The information presented in this report is descriptive of the college careers of young adults about four and one-half years after high school. It is an in-depth analysis of who went to college, who dropped out, who returned, and who graduated on schedule. Controls on various background characteristics of the students are introduced in most of the tabular presentations. In addition to social class, race, and sex, these include other factors, such as ability test scores, high school curriculum placement and educational plans.

The main objective of this report is to examine what factors are associated with this pattern of events, including not only who entered college on schedule and who entered later, but who dropped out and who came back. The discussion and most of the tables and figures focus on socioeconomic status, race, and sex differences in the college attainment process. In doing so, the authors control for differences in ability between these groups. Careful attention also is given to which students entered two- or four-year colleges and the resulting consequences. In addition, this report gives special attention to the part-time students.

Also contained is a section on students who by 1976 had graduated—those actually graduated ahead of schedule, those who obtained two-year diplomas instead of four-year degrees, those who were still on schedule but had not graduated because they were enrolled in five-year programs, and those who were not enrolled for brief periods during some other part of the year.

Classification: Postsecondary education (performance)

157

Eckland, B. K., & Lindsay, P. North-South differences in the impact of desegregation in school and college. Chapel Hill, North Carolina: University of North Carolina, April 1978.

This paper describes data derived from the NLS base year and first follow-up surveys. The sample and subsamples are restricted to whites and blacks. Hispanics and other minorities have been deleted.

Regression models are presented; in most models only the standardized regression coefficients are reported. However, when making a direct comparison of the effects of a particular predictor variables across groups, then the unstandardized regression coefficients must be used.

Selected results show that:

(1) low SES Blacks are more likely to go to college than low SES Whites;
(2) Southern Blacks overall are less likely to attend college than Northern Blacks;
(3) There is no difference in grades achieved by Northern and Southern Blacks not attending Black colleges; Southern Blacks attending Black colleges obtain substantially better grades in college than those attending other institutions.

Classification: Postsecondary education (access: race and sex differences)

158 ED 155 222

Fetters, W. B., Dunteman, G. H., & Peng, S. S. *Fulfillment of short-term educational plans and continuance in education: October 1972 and October 1973* (NCES 76-218). Washington, D.C.: U.S. Government Printing Office, 1977.

This report presents basic descriptive analyses of the planning and activity status of the NLS sample members. The following questions are addressed: (1) What were the young people's plans shortly before high school graduation? (2) What were they doing shortly after graduation? (3) How many fulfilled their plans? (4) What were they doing one and one-half years after graduation? (5) How many changed from one activity to another?

Classification: Postsecondary education (access); labor force participation

159

Fuller, W. C., Manski, C. F., & Wise, D. A. New evidence on the economic determinants of postsecondary schooling choices. John Fitzgerald Kennedy School of Government, Harvard University, June 1980: Number 90D. (Grant from Exxon Education Foundation)

To determine the effect of aid on the postsecondary schooling of youth, this study estimated a qualitative choice model of the college and work choices of high school graduates.

The NLS data allowed much better estimates of the effects on student choices of tuition cost, living cost, and scholarship aid than could be obtained in previous studies. Also, confirmed with some conviction was the hypotheses that on the average, individual preferences for a given college at first increase with the average SAT of students at that school, but then decline as the average abilities of students in the school exceed those of the individual.

The results reported in this paper are based on an exogenous subsample of 4,000 respondents.

Classification: Postsecondary education (access: financial aid)

160

Fuller, W. C., Manski, C. F., & Wise, D. A. *The impact of the basic educational opportunity grant program on college enrollments.* John Fitzgerald Kennedy School of Government, Harvard University, July 1980: Number 94D. (Supported by a grant from Exxon Education Foundation)

This study examines the effect of the BEOG Program on freshman enrolled in college and technical school. An analysis is performed using a new econometric model of student choice among postsecondary school and work activities. It is estimated that in 1979, forty-one percent of the low income students who received BEOG awards would not have enrolled in postsecondary schools in the absence of the program. On the other hand, only seventeen percent of enrollments of middle income recipients and six percent of enrollments of high income students can be attributed to the program's existence. Fully forty percent of the one billion dollars in BEOG money awarded to freshmen in 1979 was received by middle and upper income students. It therefore appears that a very significant fraction of the BEOG budget in 1979 was spent as a pure subsidy.

The NLS formed the primary data source for the empirical work, providing extensive socioeconomic and demographic background, the results of SAT and IQ type tests and high school attributive data. Student reports of colleges applied to, admissions received, and financial aid offers tendered are included as is the identity of the postsecondary alternative actually chosen.

The model of college-going decisions was estimated via maximum likelihood on an exogenous subsample of 4,000 NLS respondents. This model is used to forecast if and how a given student admitted to a given set of colleges would react to changes in the cost of enrollment at those schools. The forecasts reported here are obtained by applying the model to NLS respondents, suitably weighted to represent the population of 1979 high school seniors.

This work may be profitably extended to consider enrollment impacts occurring after the year following high school graduation. Analysis of the effect of the BEOG program on college dropout rates and on the frequency of delayed college entry would also be of interest.

Classification: Postsecondary education (access: financial aid)

161

Golladay, M. A. *The condition of education: 1976* (NCES 76-400). Washington, D.C.: U.S. Government Printing Office, 1976.

This document, prepared for the U.S. Congress, is the 1976 edition of the statistical report on the condition of education in the United States together with a description of the activities of the National Center for Education Statistics. Some of the tables presented in the report are based on NLS data. Chapters include: (1) Education: An Overview; (2) Outcomes of Schooling; (3) Concerns of Elementary and Secondary Education; (4) Postsecondary Education Participation; (5) Relationships Between Education and Work; (6) Education Personnel; (7) Elementary and Secondary School Finance, and (8) International Comparisons of Education in the U.S. and Other Countries. Also included are tables, technical notes and program and plans of NCES for fiscal years 1976 and 1977.

Classification: Postsecondary education (access)

162

Gollaay, M. A. *The condition of education: 1977 edition—Volume three, part one.* A statistical report. (NCES 77-400). Washington, D.C.: U.S. Government Printing Office, 1977.

This document prepared for the U.S. Congress is the 1977 edition of the statistical report on the condition of education in the United States together with a description of the activities of the National Center for Education Statistics. Some of the tables presented in the report are based on NLS data. Chapters include: (1) Education: An Overview; (2) A Context for Examining the Condition of Education; (3) Elementary and Secondary Education; (4) Postsecondary Education; (5) Participation; (6) Outcomes; and (7) Financing of Public Elementary and Secondary Schools.

Classification: Postsecondary education (access, performance)

163

Gruber, J. E. Sources of satisfaction among students in postsecondary education. Dearborn, Michigan: University of Michigan-Dearborn. *American Journal of Education,* Vol. 88, No. 3, May 1980.

This research examines differences in educational satisfaction among black and white male students in postsecondary institutions. Three types of variables are used to study these differences: student characteristics (high school ability, expectations, and self-esteem); institutional characteristics (school and program type); and academic achievement (postsecondary grades).

Findings show that blacks derive greater satisfaction than whites from their educational experiences for three important reasons: they have higher self-esteem, a greater proportion are enrolled in vocational schools and programs, and they experience greater status increase when their expectations and the type of school they actually attend are compared. These three factors are associated with high educational satisfaction. School and program type per se have little direct influence upon satisfaction; their effects are mediated.

The first part of the analysis is descriptive: mean levels of satisfaction for each category of the variables are presented, along with difference-of-means tests comparing the race groups. The second part of the study employs causal analysis. Path analysis is a useful technique for determining the direct and indirect variables taken as effects of variables which are taken as causes. The relative influence of a single independent variable upon the dependent variable for each race group is determined using the standardized and unstandardized b coefficients which allowed the authors to compare the influence of each variable on black versus white satisfaction. The standardized coefficients tell the influence of one variable, relative to others, in determining the satisfaction of a specific race group.

Classification: Postsecondary education (performance); personal, career and psychological development

164

Hilton, T. L. *Persistence in higher education—An empirical study.* Prepared for the College Examination Board. Princeton, New Jersey: Educational Testing Service, August 1980.

The objectives of this study are the following:

(1) to identify the major characteristics of students who remain in college in terms of patterns and duration of attendance,

(2) to examine potential dropouts to determine why some persist while others drop out as predicted, and

(3) to conceptualize and test a comprehensive model of the persistence process using the National Longitudinal Study data base.

The general working hypothesis guiding the study was that persisting in higher education represents the cumulative impact of a chain of career decisions by the individual student.

A major value of this study was its ability to estimate measurement error, to clarify underlying constructs, and to analyze relationships among variables corrected for measurement error. In taking this route, the research started where Freeberg and Rock (1975) of ETS left off in their study of the NLS data.

The author's examination of the patterns of attendance for the total sample supported the generalization that has been widely reported in the current literature: the practice of "stopping out" is common. Only about 25 percent of contemporary students enter college immediately after high school graduation and continue to attend without interruption. The authors were surprised, however, when major subgroups of the total sample were examined.

Contrary to past studies, the patterns of attendance for black students and white students and for male and female students were, in general, quite similar; the dropout rates for these major groups were especially similar.

Perhaps of most interest are the variables that appear not to influence retention when other causative variables are, in effect, held constant. Especially notable is the absence of evidence that race has an independent effect on college retention when steps are taken to correct for error of measurement and to partial out the influence of other correlated variables and, similarly, that SES has no effect other than its *indirect* effect on the students' perceptions of their parents' aspirations and on students' choices of curriculum.
Classification: Postsecondary education (performance)

165
Jackson, G. A. Financial aid and student enrollment. Ohio State University Press, *Journal of Higher Education*, 49, (6), 1978. (USOE contract grant support from Exxon Education Foundation and the Spencer Foundation)

This research seeks evidence regarding what needy students will do in the absence of aid, or how the availability of aid will affect the aspiration of a potential student, regardless of need. The focus is necessarily surrounded by analysis of several other influences on students' decision processes. A subsample of 5,220 NLS respondents who completed the base-year and first follow-up questionnaires and had school record and test information are utilized for this study.

The research shows that an applicant offered aid by the college of his or her choice is 8.5 percentage points more likely to attend college than similar applicants not offered aid. These data imply that the award of aid is more important than the amount, but to efficiently increase enrollment, aid must be given to highly responsive subgroups who do not already enroll without aid such as low-SES students. However, efficiency is not sufficient: an enrollment-directed aid program must increase aggregate enrollment. Overall, the argument that financial aid is a powerful influence on students finds little support here.
Classification: Postsecondary education (access: financial aid)

166
Jackson, G. A. How students pay for college: Temporal and individual variation. Cambridge, Massachusetts: Harvard University. Reprint from *Higher Education*, 1980. (Supported by the Exxon Education Foundation and the Spencer Foundation)

College students' finances are of considerable public interest. Student finances influence student choices, and student choices have public consequences. Moreover, much public money is spent to assist students financially. Yet remarkably little is known about student finances, particularly as they vary over time or among individuals. This study provides some information about how students pay for a college education. Based on two sources of data—early surveys of college freshmen, and the NLS—it decomposes student expenditures toward college according to the source of funds. The study then examines the resulting distribution of funds as they vary over time and among students who live in different places, who performed differently in high school, and who come from backgrounds of differing SES levels. Although the distribution does change with these variables, the author concludes that there is little evidence that current public aid programs are misdirected.

This analysis includes NLS data for the 8,528 students who reported that they were full-time students in a two- or four-year academic college in October 1972 and who answered the relevant finance questions without major inconsistencies.
Classification: Postsecondary education (access: financial aid)

167
Jackson, G. A. *Student demand for postsecondary education.* Preliminary report, Harvard Graduate School of Education, Cambridge, Massachusetts, September 1976.

The purpose of this study is to discover what effect manipulable characteristics of institutions—primarily price and financial aid—and

demographic trends have on students' decisions for college education. The analyses were based upon a sample of 5,179 individuals from the NLS. The general model was as follows: application = place, background, school, student, friends, occupation, and aspirations. Results show that student and plans are most important in determining students' postsecondary decisions.
Classification: Postsecondary (access: financial aid)

168 ED 168 396
Kolstad, A. J. *Attrition from college: The class of 1972 two and one-half years after high school graduation* (NCES 77-266). Washington, D.C.: National Center for Education Statistics, September 1976.

This bulletin presents some findings about attrition from two-year and four-year colleges based on NCES's National Longitudinal Study of the High School Class of 1972. Attrition is generally defined as withdrawal from college without completing a degree; in this bulletin students who had attended school in the first two years but did not attend school in fall 1974 (and had not completed a two-year program) are defined as withdrawn. The four-year colleges lost 23.5 percent of their entrants. Among two-year college students, 39.3 percent withdrew without completing a degree, so two-year colleges clearly lost more students than four-year colleges. Private schools and schools with higher than average test scores for entering students had lower attrition rates. The majority of students who leave college report doing so for nonacademic reasons. Those students who work full-time withdraw at nearly double the rate of those with a part-time job or no job at all. Black and Hispanic students withdraw somewhat more frequently than white students, but in four-year colleges these differences disappear when adjusting for socioeconomic background.
Classification: Postsecondary education (performance)

169
Kolstad, A. J. *The role of aspirations and ability in rates of college progress.* Paper presented at the American Statistical Association, San Diego, California, August 17, 1978.

This paper assesses the extent of variation in rates of progress through college during the first two years; it also seeks to identify factors associated with such variation. The focus is on a narrow aspect of student flows: the rate of earning college credits among full-time students.

Data for this analysis came from the National Longitudinal Study of the High School Class of 1972. Two subsamples were chosen, consisting of those two-year or four-year students enrolled full-time in both October 1972 and 1973 for a sample of the first year (n = 3,524) and October 1972, 1973 and 1974 for a sample of the first two years (n = 2,702).

This paper discusses the finding that a small proportion of the variation in rates of progress can be predicted on the basis of student background characteristics and experiences. The socioeconomic background, educational plans, ability scores, and grades of the two-year sample are slightly higher than the first-year sample, while the proportions of blacks and females are slightly lower.

Multiple regression coefficients are presented to address the question of what kinds of students accumulate more credits. As expected, socioeconomic background and race are unrelated to college progress. Being female provides a 1.2 credit advantage in the first year and 2.9 credits over two years.

Time spent on educational activities depends on the relative strength of academic compared to other motivations, including financial ones. Quality of performance while spending time on educational activities depends on academic ability and can be predicted by prior grades.
Classification: Postsecondary education (performance)

170
Kolstad, A. J. *The influence of high school type and curriculum on enrollment in higher education and postsecondary education.* Washington, D.C.: National Center for Education Statistics, April 1979.

This study examines the effects of school type and curriculum on high school grades, plans for further schooling, enrollment in higher education, and postsecondary training. Some findings are the following: grades were lower at college preparatory high schools and higher at vocational-technical schools, indicating that teacher assessments are based on standards relevant to each school. Plans for college were found to be unaffected by school types. Plans for further vocational training were lowered somewhat by attending a specialized area vocational high school. Postsecondary training, broadly defined, was found to be unaffected by school type. Specialized schools had a positive effect on academic enrollment.

This study utilizes a recursive causal ordering among the variables to estimate a series of multiple regression equations; the difference in each variable's coefficients in successive equations indicates the extent to which the new intervening variables mediate the total effect of the prior variables.

Classification: Postsecondary education (access); secondary education

171

Lawrence, J. E. S., & McAdams, K. C. *Vocational development theory and the NLS* (NCES Contract No. OEC-0-73-6666). Research Triangle Park, North Carolina: Research Triangle Institute, December 1978.

This paper is the first part of an ongoing study to (1) review in a formal report the literature on vocational development and its application to NLS data; (2) explicate and report on factors affecting vocational development from the NLS data in the context of the theoretical background established in the literature review; and (3) prepare and report on recommendations for future NLS instrumentation regarding assessment of vocational development.

While coverage of previous theory and research is comprehensive, no attempt is made in this paper to provide more than an outline.

Only concepts potentially relevant to NLS examination are dealt with in detail. This review has a two-fold purpose: (1) to examine major theoretical streams in vocational and career development research, and (2) to select and describe in detail some concepts potentially useful in the interpretation of NLS data relating to vocational development.

This paper stresses that the important theories of individual vocational development are psychological in orientation, disparate in specific emphasis, and not widely tested beyond fairly restricted subject samples via special instrumentation.

An extensive bibliography is also provided.

Classification: Postsecondary education (vocational-technical)

172

Levin, B. H., & Clowes, D. A. *The dormitory effect: The effect of living at college on attainment of the baccalaureate degree.* Weyers Cave, Virginia: Division of Social and Behavioral Sciences, Blue Ridge Community College. Blacksburg, Virginia: Community College Program, Virginia Polytechnic Institute and State University, 1980.

This study seeks to clarify three questions drawn from the literature related to impacts of living environments upon progress toward educational goals. First, do students who live in residence halls have higher social status, higher high school grades, and higher aptitude than students who live at home and commute to college? Second, do residential students have a higher graduation rate than commuter students? Third, is there any justification at this point for hypothesizing an independent and positive effect of residence hall living upon attainment of educational goals?

The subjects selected for this study were the 686 members of the NLS who met all of the following criteria: (a) in May 1972 aspired to attend graduate school, (b) in October 1973 attended a two or four year college full-time, were single, and lived either with a parent or in a college-owned residence hall or apartment, and (c) in 1977 indicated whether they had or had not attained the baccalaureate degree. Results show that 55 percent of the students who attended a four-year college in October 1973 graduated with a Bachelor's degree in 1977 while only 35 percent of those who began in a two-year college graduated with the Bachelor's degree in the same time frame.

The authors were intrigued to note that the difference in attainment of the baccalaureate degree narrowed when compared to students who lived with parents but began higher education in a two-year college with similar students who began in a four-year college.

Classification: Postsecondary education (performance)

173

Levin, B. H., & Clowes, D. A. Realization of educational aspirations among blacks and whites in two- and four-year colleges. *Community/Junior College Research Quarterly,* 4: 185-193, 1980.

This paper examines the hypothesis that a two-year college is the logical system for achieving educational equality in higher education.

Patterns of attendance in two-year colleges for blacks and for whites were studied. The purpose was to replicate Peng's (1977) earlier study that found low aptitude blacks overrepresented in four-year rather than two-year colleges. That finding was confirmed despite a more conservative approach to the data. The next step was to establish the relationships between educational outcomes and each of educational aspirations, race, aptitude, and socioeconomic status. The final step was to test Astin's (1977) claims that attendance at two-year colleges augers ill for those aspiring to a four-year college degree.

The authors found in this study that blacks are less likely than whites to meet aspirations of attend-

ing four-year colleges. The authors also found that attendance at a two-year college is related to a reduced possibility of obtaining a four-year degree.
Classification: Postsecondary education (access: patterns of college attendance, race and sex differences; performance)

174

Lichtman, M., Rothschild, S. J. S., & Peng, S. *Educational attainment among females and minorities.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 8-12, 1979. (Work on this project was in part supported by the National Center for Education Statistics, Office of Education No. 300-78-0561).

While women comprise almost half of the labor force in this nation, their attainment processes have not been fully understood. This research was designed to accomplish the following two main objectives:

- To examine the extent of differences in educational attainment among the subgroups—black females, Hispanic females, and white females—compared to their male counterparts.
- To test the efficacy of a status attainment model to predict educational attainment for females that employs a number of exogenous and intervening variables.

Findings regarding the process of status attainment among three racial groups and between males and females within racial groups suggest that the attainment process for the groups appears to be different.

Although the model predicts a considerable amount of the variance in educational attainment for the Hispanic females and somewhat less for the males, only two variables—educational expectation and percentile rank—were directly related to attainment. As in the case of the blacks, the effects of parental education and occupation were minimal.
Classification: Postsecondary education (performance); women

175

Lindsay, P., & Eckland, B. K. Why southern blacks don't go to college. *Sociological Forum,* Fall 1979.

Data from this paper are from a subsample of 1,717 blacks who participated in the National Longitudinal Study base-year (1972) and first follow-up (1973) surveys of the high school senior class of 1972. The sample used for this paper is limited to black respondents who completed the first follow-up and for whom test scores were available. Bivariate and multivariate distributions are explored for regional differences.

Results show that black high school seniors are more disadvantaged in the south than in the north on the three predictors of college attendance which were used: academic aptitude, socioeconomic status, and urbanism. The conclusion is that regional differences in these predictors account for some but probably no more than about half of the regional differences in the college attendance of blacks.

Academic performance (as measured by standardized tests) is clearly the more important predictor of black educational attainment in the south, and urbanism is the least important.
Classification: Postsecondary education (access: race and sex differences)

176

Melone, F. R. & Fetters, W. B. *Effects of marriage and childbirth on completion of higher education.* Paper presented at the American Statistical Association, San Diego, California, August 1978.

The purpose of the study is to use NLS data to shed some light on the process of marriage, childbirth, and educational attainment.

The sample was restricted to those who had not been married and had no children as of October 1973. Of this group 34 percent of the women and 29 percent of the men were married three years later (October 1976); and 15 percent of the women and 11 percent of the men had become parents. Separate regression analyses were performed for each sex with level of educational attainment and expectations of educational attainment as dependent variables.

This study produced several interesting findings. The best predictor of October 1976 attainment included in this analysis is the level attained as of October 1973. For both men and women, those who had completed a year of higher education by October 1973 could expect to maintain their one year head start through October 1976, over those with similar plans and expectations at the time of high school graduation. For women, marriage had a slightly greater depressant effect on the level of attainment in 1976, than did childbirth. For men, marriage has little detrimental effect on attainment. Childbirth has about the same effect on men as on women. Getting married has a relatively large effect on educational expectations of women. For men, marriage has a depressant effect on expectations but only about 2/3 percent as large as that for women. Surprisingly, the birth of a child has a much greater effect on the educational expectations of men than women. The total impact of getting married and having a child is almost as large for men as for women.

However, the overriding determinants of final educational attainment probably are to be found among the motivational factors which are present before the interruptions caused by marriage or childbirth.

Classification: Postsecondary education (performance)

177

Mullen, J. K. *A differential expenditure analysis of financing higher education.* Potsdam, New York: Clarkson College of Technology.

Previous work in the area of financing higher education has suggested that the present system of low tuition state universities and colleges may be an inefficient one for stimulating overall enrollment levels and for enhancing equal educational opportunities. There have been numerous reform proposals that the public tuition charges should be raised and need-based direct student grant programs be implemented. The purpose of this research is to demonstrate the efficiency and equity implication of such a financing alternative. The findings indicate generally favorable enrollment effects from such a policy. While a shift in the income distribution of subsidies is expected, the magnitude of this change suggests careful implementation of new financing policies. In particular, this research suggests that narrowing the tuition gap may alter the pattern of benefit incidence to be most favorable to lower-income families given the prior existence of need-based student grants.

Data obtained from the New York State Education Department (March 1974) were employed. NLS data from the base-year and first follow-up surveys were used in connection with an estimation of the response of potential students from different family income classes to price changes at public and private institutions in terms of both their college-going and college-choice decisions. NLS data reveal extensive financial aid information which allows for the construction of price variables (net of such aid) rather than relying solely on tuition charges at particular institutions.

Classification: Postsecondary education (access: financial aid)

178

Munro, B. H. Dropouts from nursing education: Path analysis of a national sample. *Nursing Research,* 29, (6), November-December 1980.

Path analysis was used to test a theoretical model of college nursing student dropouts. Multiple regression was used to assess the relative importance of the predictor variables. Students' self-reported reasons for dropping out were studied by contingency and correlational analyses to determine the relationship between these reasons and individual difference variables. Factor analysis was used to develop scales to measure the variables of locus of control, self-esteem, social integration and institutional commitment. Included in the sample were students entering two- and four-year nursing programs full-time in the fall of 1972. These two groups of students were found to be significantly different in measures of cognitive ability and in aspirations for further education. Approximately 27 percent of the two-year and 41 percent of the four-year students withdrew from their nursing programs during this study.

This study attempted to define categories of dropouts by studying those who persist as well as those who withdraw, by drawing subjects from a nationwide longitudinal study, and by adopting a useful theoretical model of the dropout process. Reasons for withdrawal most frequently cited by both groups related to losing interest in nursing and becoming interested in other fields of study. Educational aspirations had the strongest direct effect on persistence in nursing for two-year students; for four-year students, academic ability was the most powerful predictor of persistence. Financial difficulties were a major reason for withdrawal from higher education, especially for nonwhites. With rising costs for higher education and rising inflation, this may become an even more serious problem.

Classification: Postsecondary education (performance)

179

National Center for Education Statistics. Realization of postsecondary education plans: First and second year. *Advance Statistics for Management Bulletin* (Number 20). Washington, D.C.: National Center for Education Statistics, March 1975.

This bulletin reveals that 59 percent of the class of 1972 planned to continue their education either in college or in a trade or business school as their major activity the year after high school. Of those students who said that the largest share of their time in the year after they leave high school would be taken up by attending school, 82 percent reported they actually were attending a postsecondary school in October 1972, a somewhat smaller proportion, 69 percent, reported continuing their postsecondary education in October 1973. The rest of this report deals only with the students who had indicated those educational plans in spring 1972. It shows the variations in their continuation in postsecondary school attendance as related to sex, high school program, racial-ethnic background, ability level, and socioeconomic status. In every category, the continuation rate dropped sharply for October 1973.

Classification: Postsecondary education (access)

180 ED 103 991

National Center for Education Statistics. *The condition of education: A statistical report on the condition of American education* (NCES 75-412). Washington, D.C.: U.S. Government Printing Office, 1975.

This document prepared for the U.S. Congress is the 1975 edition of the statistical report on the condition of education in the United States together with a description of the activities of the National Center for Education Statistics. Some of the tables presented in the report are based on NLS data. Chapters include: (1) A Context for Examining the Condition of Education; (2) The Educational Attainments of Young Americans; (3) Financing the Schools; (4) The Elementary and Secondary Education Enterprise; (5) The Educational Attainments of Participants in Postsecondary Education; (6) Financing Postsecondary Education; and (7) The Postsecondary Education Enterprise. A discussion of the NLS is on pages 200-221.

Classification: Postsecondary education (access)

181

National Center for Education Statistics. *The condition of education.* Washington, D.C.: U.S. Government Printing Office, 1978.

The Condition of Education is an annual statistical report describing conditions in education.

The report is organized to reflect the characteristics of the education system and its relationship to the larger society. Chapter 1 deals with the societal context for describing the condition of education; Chapter 2 covers elementary and secondary education; Chapter 3 examines postsecondary education; Chapter 4 looks at education personnel; Chapter 5 examines the financing of higher education; and Chapter 6 compares education and labor force participation patterns in the United States with those in other selected countries.

Tables based on NLS data are on pages 130, 131 (educational attainment after high school); 134, 135 (withdrawal rates); 136, 137 (financial aid); 228, 229 (educational expenses); and 238, 239, 240, and 241 (financial aid).

Classification: Postsecondary education (access)

182

National Center for Education Statistics. *The condition of education for Hispanic Americans.* Washington, D.C.: U.S. Government Printing Office, 1980.

The overall aim of this report is to compile from existing data sources statistical information concerning the educational participation and achievement of Hispanic Americans, and to organize and interpret this information as objectively as possible. Information is also provided concerning the sociological, demographic, and employment characteristics of Hispanic Americans and how they relate to their educational attainment.

Tables utilizing NLS data are on pages 60-61 (high school programs); 64-65 (age distribution of seniors); 66-67 (time spent on homework); 68-69 (academic achievement in high school); 70-71 (factors interfering with homework); 72-73 (people who influenced choice of program); 74-75 (opinions about what is important in life) 76-77 (participation in extracurricular activities) 78-79 (lack of awareness of federal programs); 182-183 (continuance in postsecondary schools); 184-185 (reasons for withdrawing from postsecondary schools); 186-187 (educational status as of October 1974); 188-189 (educational status as of October 1976); 230-231 (activity status of high school graduates); 232-233 (family and financial status as of October 1976); 234-235 (highest level of educational attainment as of October 1976); 236-237 (perception of sex discrimination in getting a good education); 238-239 (perception of race discrimination in getting a good education); and 240-241 (attitudes toward self and life).

Classification: Postsecondary education (access)

183

Nolfi, G. J. *Demand for postsecondary education and transition from high school to work.* Cambridge, Massachusetts: University Consultants, Inc., 1977.

This study is divided into five main tasks: (1) an analysis of work experiences and use of labor market intermediaries by those high school graduates who directly enter the labor market, (2) an analysis of the expectations students have for future work and the effect of these on current school or work choices, (3) examination of the intervening hypothesis, (4) the effect of job expectations on the particular choice of type of schooling by institution and subject field, and (5) discussion of policy priorities and predictive policy analysis using derived models. Thus, the process of job search and transition from school to work will be documented and analyzed.

Labor market status and participation and the determinants of labor market success will be analyzed. Factors affecting the choice of occupation and choice among job alternatives faced by high school graduates will be analyzed (using a conditional logit approach) as well as how expectations determine his/her decisions about further education/training or work.

Specifically, analysis will explore the application decisions of the individuals, the admissions decisions, the financial aid decisions of the institutions; the individuals' decision to attend a particular institution which involves the probability of choice among institutions; and the decision to drop out or continue after a period of time.

In the Demand Study, training options in the world of work are being treated in a significant broadening of the traditional view of analysis of *demand for college* education. In the Work Study, aspects of choice among training options for those students who proceed to training rather than immediately going into the labor force will be examined.

Completion of the Demand Study will yield basic analysis of what choices the high school class of 1972 made and an understanding of the personal and background characteristics which are correlates of those choices. The results of the transition study will be a series of tables and equations highlighting the determinants and levels of earnings and other dimensions associated with choices made in the transition from school to work.
Classification: Postsecondary education (access); labor force participation

184
Olson, L. S. *An empirical study of decisions involving postsecondary vocational school training, Volume I—Executive summary.* Rochester, New York: University of Rochester. Washington, D.C.: U.S. Department of HEW-OE-Bureau of Occupational and Adult Education, March 1978.

This study examines decisions involving private, postsecondary vocational schooling using first follow-up male respondents of the NLS and two additional large, national sets of data on males. Particular attention is paid to three target groups—inner-city and rural individuals and dropouts. Various equations are estimated using a life-cycle model of time allocation to market work, college, and vocational schooling.

Empirical results indicate that persons who took very short programs in private vocational schools (less than three full-time-equivalent months) earn more than persons who didn't train, but this advantage decreases and eventually reverses for longer programs. Estimated dropout penalties are insignificant for all but inner-city youths. Dropout rates from private vocational schools are high, and the large dropout rate appears to be an important method of determining program length. Other results indicate that persons with poor socioeconomic backgrounds and high IQ's attend private vocational schools, and during the time they attend, students get higher paying jobs than similar nontrainees.

Current governmental policies encourage much larger programs in private vocational schools than appear to be justified by this study. Inner-city youths in particular should be encouraged to take and complete short programs, since their estimated dropout penalty is large.
Classification: Postsecondary education, (vocational-technical education)

185 SB2 ED 150 182
Peng, S. S. Trends in the entry to higher education: 1961-1972. *Educational Researcher,* 6 (1), 1519, January 1977.

This study examines the trend in the entry to higher education based upon information drawn from Project TALENT and NLS. Results indicate that the rate of entry into four-year institutions has declined, but the rate of entry into two-year college has increased; the combined overall college-going rate has increased for women, but there appear to be no substantial changes for men. Results also reveal that sex and SES differences in college entry have been reduced and that racial differences can be explained largely on the basis of differences in academic ability and SES among the racial groups.
Classification: Postsecondary education (access)

186
Peng, S. S., Ashburn, E. A., & Dunteman, G. H. *Withdrawal from institutions of higher education* (NCES 77-264). In press, Washington, D.C.: U.S. Government Printing Office, 1977.

This report is divided into eight chapters. Chapters I and II provide a description of the NLS sample, instruments, data collection procedures, and the weighting process. Chapter III presents the definition and description of how dropouts were classified for this study. Estimates of withdrawal behavior from American institutions of higher education are presented in Chapter IV. Separate estimates are provided for four-year and two-year institutions. The extent of withdrawal is also examined by institutional characteristics such as type of control, size, and selectivity levels, and by subpopulations defined by race, sex, and SES. In Chapter V, students' self-reported reasons for withdrawal are discussed. The withdrawal process is extensively investigated by analytic models in Chapter VI. This includes a conceptualization of the withdrawal process and the specification of analysis techniques (i.e., log-linear models to test specific hypotheses). Chapter VII is a description of what happens to withdrawals regarding employment status, career and education plans, and psychological changes. The last chapter (Chapter VIII) discusses the findings and their implications.

Classification: Postsecondary education (performance, access, financial aid)

187

Peng, S. S., & Bailey, J. P., Jr. Differences between vertical transfers and native students in four-year institutions. In press, *Research in Higher Education*, 1977.

This study examines differences between those who transfer from two-year colleges and those who enroll in four-year institutions immediately after high school in their background variables, individual characteristics, financial aid status, and college integration. Results indicate that transfers tend to come from lower SES families, and to have lower ability, high school achievement, and educational aspiration than native students. Transfers are less likely than native students to receive scholarships, fellowships, or grants, and they show lower achievement in the year after transfer. Implications of these findings are discussed in the paper.

Classification: Postsecondary education (access; financial aid; performance)

188

Peng, S. S., Bailey, J. P., Jr., & Eckland, B. K. Access to higher education: Results from the national longitudinal study of the high school class of 1972 (NCES No. OEC-0-73-6666). *Educational Review*, December 1977.

The purpose of this report is to synthesize some of the major findings of at least 37 studies of access to college using NLS data. The findings can be grouped into six areas:

(1) changes in college attendance patterns;
(2) race, sex, and social class differences in college attendance;
(3) delayed entry;
(4) where students go to college;
(5) the impact of high school tracking; and
(6) the impact of financial aid and proximity on college attendance.

In summary, sex and race differences in both immediate and delayed entry to college are declining. Social class background is still an exceedingly important factor in college attendance. Financial aid and disposable family income seem to have relatively little impact on college attendance. High school tracking is a persistent factor in both immediate and delayed entry to college.

Classification: Postsecondary education (access, performance, financial aid); secondary education (school or program effects)

189

Peng, S. S., & Dunteman, G. H. *Socioeconomic background and postsecondary educational attainment: National longitudinal study of the high school class of 1972.* Research Triangle Park, North Carolina: Research Triangle Institute, August 1975.

The purpose of this paper is to present some basic statistics concerning postsecondary entry and persistence for four SES groups at each of four ability levels.

In the first follow-up survey, participants were asked to indicate their educational activities in October 1972 and in October 1973. Such data, together with the participants' aptitude test scores and socioeconomic status, constituted the basis for the analyses.

The discrepancies in enrollment rates between students of the higher and the lower SES quartiles within ability quartiles were disturbing. The existing discrepancies in college attendance between members of various SES quartiles, especially at the highest ability level, may indicate that many high ability-low SES students are still deprived of the opportunity for postsecondary education because of their lack of interest and/or lack of the necessary financial resources. It may be that a substantial number of high ability-low SES students are not particularly interested in pursuing postsecondary education.

Findings indicate the possibility that other factors in addition to socioeconomic status, such as motivation, parental expectation and peer pressure, may account for these differential rates of college enrollment. Providing more financial aid alone to the socioeconomically disadvantaged children

without complementary programs to enhance aspirations for postsecondary education may not be sufficient to reduce the discrepancies in college-going rates between the low and the high SES members.
Classification: Postsecondary education (performance)

190
Peng, S. S., & Dunteman, G. H. *Equal opportunity in postsecondary education: An appraisal with recent evidence.* Research Triangle Park, North Carolina: Research Triangle Institute, December 1975. (Draft)

This study is designed to describe the current patterns of participation in postsecondary education, college persistence rates, and fields of study for different subpopulations; and to examine the problem of equality of opportunity in postsecondary education.

College persistence rates, group differences in fields of study, and differences in participation in four-year colleges, two-year colleges, and postsecondary vocational-technical programs by various subpopulations are explored. The sample used includes all respondents who completed the NLS First Follow-Up (21,350).

Ethnic group differences in postsecondary education participation can be explained largely on the basis of ability and SES differences. Based on NLS data, there seems no reason to assume that whites have advantages in access to higher education. The equality of postsecondary education seems more a socioeconomic problem than a racial problem.
Classification: Postsecondary education (access)

191 SB2 ED 150 927
Peng, S. S., & Dunteman, G. H. *Transfer students in institutions of higher education.* Research Triangle Park, North Carolina: Research Triangle Institute, July 1976.

This study was designed to achieve the following objectives:

(1) To describe the extent of transfers in institutions of higher education, and to reveal differences in transfer rates among various types of institutions, and biosocial groups;
(2) To examine differences between transfers and non-transfers in four-year and two-year institutions, and differences between 2-4 transfers and four-year college non-transfers in background variables, financial aid status, satisfaction with college education, and academic performance;
(3) To describe students' self-reported reasons for changing schools; and
(4) To test the incongruency hypothesis between the student and the institution as reasons for transferring.

It was found that the 2-4 transfers constitute the largest group, and that two-year colleges may serve as a warm-up place for many students to obtain a college education.
Classification: Postsecondary education (performance; access: financial aid)

192 ED 151 393
Peng, S. S., Dunteman, G. H., & Fetters, W. B. *Selected results from the base-year and the first follow-up surveys.* Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., 1975.

This paper summarizes some of the findings from cross-sectional and longitudinal analyses. The major themes are the profiles of the class of 1972 in their senior year, their educational and vocational activity states in October 1973, plan fulfillment, and activity state transitions from October 1972 to October 1973. On-going analyses and future analysis plans are also discussed in the paper.
Classification: Postsecondary education (access); labor force participation

193
Peng, S. S., & Fetters, W. B. *The able students who did not go to college: A talent loss problem?* Paper presented at American Educational Research Association, Toronto, March 1978.

The purpose of this study is to examine why a substantial proportion of highly able students in the high school senior class of 1972 did not attend college, and what they are currently doing. The sample for this study includes the 4,054 NLS participants who had test scores and were in the top quarter of general academic ability. About an equal number of them were men and women; less than seven percent were minorities; 549 of this sample had not attended college as of October 1976.

Simple correlations and standardized multiple regression analyses reveal that those able students who did not attend college were more likely to have lower class rank, to take fewer math courses, and to be in non-college preparatory high school programs. A significant relationship exists between socioeconomic background (SES) and college attendance; those able people who did not go to college were more likely to come from families of lower SES or income than students who attended college.

More women than men did not attend college; however, this difference became insignificant when other variables were considered. Early marriage appeared to have a depressant effect on college attendance and attitudes toward work also appeared to be related to college attendance.

Of those able young people who did not go to college, about 80 percent were working and 5 percent were looking for jobs in October 1976. Only a small proportion had fulfilled their career goals 4½ years after high school. The majority were doing something other than they had planned. They were engaged mostly in clerical, craftsman, operative, and service jobs, yet over 80 percent expressed satisfaction with their jobs as a whole.

Classification: Postsecondary education (access)

194 ED 148 206

Peng, S. S., & Fetters, W. B. Variables involved in withdrawal during the first two years of college: Preliminary findings from the national longitudinal study of the high school class of 1972 (NCES No. OEC-0-73-6666). *American Educational Research Journal,* 15 (3), 361-372, Summer 1978.

This study investigates the process of withdrawal from four-year and two-year institutions of higher education.

Means and standard deviations of predictor variables for persisters and withdrawals separated by the type of college are presented. Also, the matrix of simple correlation coefficients and standardized regression coefficients for the full withdrawal model are shown.

Results indicate that (1) women students are more likely to withdraw only in two-year colleges; (2) white students are more likely than black students to withdraw when other variables are controlled; (3) high school program, college grades, and educational aspiration account for most variance of withdrawal behavior; and (4) the receipt of financial aid is not significantly related to college persistence.

Classification: Postsecondary education (performance)

195

Peng, S. S., & Kolstad, A. *Women who enter male-dominated fields of study in higher education.* A paper presented at American Educational Research Association, Toronto, March 1978.

This study examines such factors as family background and influence, high school experience, aspirations, and life goal orientations that might influence women's entry into male-dominated fields in higher education.

The following questions were addressed:

(1) What types of women defy strong sex-role stereotypes by entering male-dominated fields?
(2) Are these women different from those in traditional roles in their attitudes and life goals?
(3) Do these women come from families of different backgrounds?
(4) Do these women receive different high school training?

Of the 9,276 NLS participants who entered either a two- or four-year educational institution by Fall of 1972, 4,525 were women. Of those women, 774 entered male-dominated fields.

Simple correlations between predictor variables and career choice, as well as multiple regression coefficients, are presented. Data show that women in the male-dominated fields differ from women in other fields in many respects. Women in male-dominated fields tend to attach greater importance to success in work, to take more science and math courses in high school, and to have higher academic ability than women in other fields. They also have higher educational aspirations. The type of family background does not seem to be relevant. Mostly academic ability, high school experiences, and aspirations determine women's entries into the male-dominated fields.

Classification: Postsecondary education (performance); personal, career, and psychological development

196

Pepin, A. *Predicting postsecondary enrollment by cognitive and non-cognitive variables.* Dissertation proposal, National Center for Education Statistics, Washington, D. C., March 1977. (Draft abstract)

The author states that it is possible to predict postsecondary enrollment by cognitive and noncognitive (self-concept, locus of control) variables and to postulate who will go into a particular activity state: enroll in college, not enroll in college, enroll in vocational education, withdraw from college, etc. Emphasis will be on noncognitive variables, highlighting their effect on postsecondary enrollment.

Classification: Postsecondary education (access)

197

Polachek, S. W. Sex differences in college major. *Industrial and Labor Relations Review,* 31 (4), July 1978.

This study uses new nationwide data to analyze sex differences in choice of college major in 1955

and 1973. The results of applying a multiple-logit model to these data indicate that to a considerable extent individuals were sorted into majors on the basis of ability and expected lifetime labor-force commitment, regardless of sex; but strong sex differences were nevertheless, smaller in 1973 than in 1959. The implied link between between sex differences in the labor market and the human capital market is important, the author suggests, for both research and policy making.
Classification: Postsecondary education (performance)

198 ED 170 303

Riccobono, J. A., & Dunteman, G. H. *National longitudinal study of the high school class of 1972: Preliminary analysis of student financial aid.* Research Triangle Park, North Carolina: Research Triangle Institute, September 1975.

The purpose of this report is to provide preliminary answers to some of the policy-relevant questions concerning the current patterns of financial support for postsecondary attainment.

Six classification variables were used to define subpopulations of respondents to the NLS: sex, high school program, race, geographic region, ability, and SES. Seven financial aid variables were used to describe source and type of student aid.

Although two-thirds of the NLS sample planned to obtain financial aid, less than one-half received it during 1972-73. Minority groups, low income students, and those attending two-year or vocational-technical colleges were more likely to report financial support. Finally, student participation in financial aid programs was strongly related to increased educational persistence.
Classification: Postsecondary education (access: financial aid)

199 ED 148 280

Riccobono, J. A., Bailey, J. P., Jr., & Dunteman, G. H. *Money and college: Differences in ability and SES.* Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., 1976.

This paper presents some descriptive statistics relating to SES and ability and patterns of students' financial support. Data show that low SES students are more likely to fulfill their plans for Federal aid than high SES students; that four-year college students are more likely to receive financial aid than two-year college students; and that SES is negatively related to Federal aid recipients and ability is positively related to non-Federal aid recipients.
Classification: Postsecondary education (access: financial aid)

200

Rice, L. D. *Race, poverty, and the colleges.* Paper prepared for the Conference on Racial and Ethnic Data of the Institute for the Study of Educational Policy, Howard University, February 1976.

It is the fundamental proposition of this paper that the data accumulated are adequate to demonstrate that the lot of blacks in American society is not equal to the lot of whites, and that what is missing are ideas and the kind of information which can guide public policy in directions most likely to be helpful in realizing full equality of opportunity for the blacks who are not yet of high school age—one-third of all blacks.

Data on blacks came from reports of the Bureau of the Census and the first follow-up data from the NLS.

At least three information gaps need to be filled:

(1) What are the causes of the accelerating numbers and percentages of female-headed familes?
(2) What are the decisive forces at work in determining whether a given high school graduate goes on to college, and at what time during the school years do those forces come into play?
(3) What are the operative reasons so many young people, black and white alike, enter but never finish college?

Classification: Postsecondary education (access, performance)

201

Robertshaw, D., & Wolfle L. M. *Discontinuities in schooling and educational attainment.* Virginia Polytechnic Institute and State University. Paper prepared for presentation at the annual meeting of the American Educational Research Association, Boston, Massachusetts, April 7-11, 1980. (Supported in part by a grant made available by the College of Education, Virginia Polytechnic Institute and State University, and in part by the National Center for Education Statistics, No. 300-78-0516)

The research reported in this paper provides a comprehensive study of discontinuities through the use of all NLS data now available. The model being estimated shows the variables of interest in their assumed order of causal priority. In this block-recursive model there are six major blocks of variables: socioeconomic background, educability and age-grade retardation, aspirations for achievement, post-secondary attendance, post-high school discontinuities and duration of education, and educational attainment.

The authors conclude that delaying entry into a post-secondary educational institution, or interrupting one's attendance, does in fact handicap one vis-a-vis those who neither delay nor interrupt. After a 4½ year time span, those who delay or interrupt may be expected to have lost a half year of education, *ceteris paribus*. However, age-grade retardation does not affect the ultimate level of one's educational attainment.

Classification: Postsecondary education (performance)

202

Rothschild, S. J. S., & Lichtman, M. *Factors related to white, black, and Hispanic women's mathematics attainments: A descriptive study.* Virginia Polytechnic Institute and State University, 1980.

Virtually no research conducted on women and mathematics is longitudinal in scope, generalizable in extent, and ethnic-race specific in nature. This descriptive study begins to fill the gap by examining the effects of background, school, and social-psychological factors on Hispanic, black, and white women's mathematics attainments. Results of descriptive analyses show differences in factors affecting white and racial minority women with respect to their decision to pursue mathematics-related fields of study.

For the descriptive analysis presented in this paper, weighted means and weighted (pairwise-deletion) correlation matrices were generated. The purpose of this analysis is to provide a preliminary profile of Hispanic, black, and white academic women with respect to their family backgrounds, high school experiences, attitudes, expectations and mathematics-related participation as expressed by their college field of study.

Some variables are important for one group only. For example, two of the background variables, the two self-concept measures, and sex-role orientation show significant correlations for Hispanic women; the children family status variable exhibits a significant (negative) relationship for black women only. Some of these factors--educational expectation, and the number of high school semesters of math and of science—seem to be influential for all three groups of women. They increase the chances for women to pursue careers in higher status math-related fields by obtaining sufficient college mathematics training.

Classification: Postsecondary education (access); women

203

Sanford, T. R. *The effects of student aid on recent college graduates.* A paper submitted to the NLS seminar (EDFO 390,335) in partial fulfillment of the requirements specified in Contract No. 300-78-0026 with the National Center for Education Statistics, Professor James L. Morrison, Project Director and Seminar Leader, 1978.

The purpose of this study is to determine the relationship between student aid received during undergraduate enrollment and the choices made by college graduates. Long-term educational loans are the type of student aid of principal interest, but other types of grants and work are considered, also.

Some types of analyses utilized are multiple crosstabs showing relationships between loans and graduate school and partial correlation analyses revealing relationships between loans and attendance.

The findings suggest three implications. First, grants appear to be the most promising type of aid in terms of encouraging graduates to attend graduate or professional school. Second, loans and work do not appear to have any negative influence on college graduates. Third, as far as short-term effects of aid, the various student aid programs currently in existence do not appear to be detrimental to the behavior of college graduates.

Classification: Postsecondary education (access: financial aid)

204

Schorr, J. K. *Great expectations: An examination of persistence and early attrition among high school seniors aspiring to the high status professions.* Dissertation proposal, Stetson University, Deland, Florida, September 1976. (Abstract)

The central hypotheses in this research will focus on the selection factors which operate among high school seniors who aspire to the high status professions such as medicine, law, and college teaching. Particular attention will be paid to female, black, and low SES aspirants in order to determine whether early attrition and loss of aspiration can account for their underrepresentation in these professions. If this is found to be the case, the mechanisms of this attrition process will be carefully considered.

Classification: Postsecondary education (performance)

205

Selby, D., & Froomkin, J. *Participation in postsecondary education: An outline sketch.* Washington, D.C.: Joseph Froomkin, Inc., July 1979.

This report describes different aspects of enroll-

ment patterns in postsecondary education. The findings are based on four years of longitudinal data. The following aspects of attendance are highlighted in the report: (1) full-year and part-year enrollment, (2) delayed entrance, (3) aspects of participation in postsecondary education for students who attended school with and without interruptions. In addition, the authors discuss educational attainment by students with different attendance patterns and some influences which affect participation. A short concluding section highlights the policy-relevance of these data.
Classification: Postsecondary education (access)

206
Shakotko, R. A., & Grossman, M. *Disability and postsecondary educational choices.* Paper presented at the Conference on Economic Aspects of Health, Palo Alto, California. Supported by NBER Grant, Spencer Foundation, July and August 1980. (Revised September 1980)

According to this study, there is a well-documented positive correlation between good health, measured in a number of different ways, and higher levels of formal education. Poor early life-cycle health may have hampered an individual's education, thereby leading to the subsequent observation that individuals in poor health tend to have lower levels of education. This paper is an empirical investigation of this potential structural relationship. The authors use panel data for a sample of 10,430 individuals who were high school seniors in the spring of 1972, and who were re-surveyed in October of each year through 1976. Various health information was collected in the base year of the survey, and the authors use these base year reports as measures of health which are predetermined with respect to educational behavior in the subsequent five years. Individuals' choices of postsecondary activities (which include three different types of postsecondary education and no postsecondary education) and the rate at which individuals leave educational activities were examined in an effort to determine if the behavior of disabled individuals differs from health individuals, and if these differences could be attributable to health problems.

Findings indicate no firm evidence that the disabled differ significantly in either their choices or their rate of leaving, but there is weak evidence that the disabled choose certain types of postsecondary education more frequently, but leave sooner. An important caveat should be appended: the disabled score significantly lower on standardized tests, which are also good predictors of educational choices and outcomes. There is also weak evidence for higher rates of return to education for the disabled.

For this study, the authors concentrate on the high school's decision as to whether a student is disabled: individuals with mental or emotional problems were excluded from the sample, and slightly over one percent of the remaining sample were classified as disabled students. A model in which to analyze educational choices and outcomes is included in the report.
Classification: Postsecondary educational (access)

207 ED 156 047
Tabler, K. A., & Wagner, A. P. *National Longitudinal Study of the High School Class of 1972: Distribution and packaging of student financial aid: Some evidence from the survey of the high school class of 1972.* Washington, D.C.: National Center for Education Statistics, February 1977.

This report addresses two questions: (1) What is the distribution of federal student aid by socioeconomic status, racial/ethnic group, student achievement/ability, and type of institution? (2) How are federal student aid funds combined with aid from other sources into student financial aid packages? Based upon the base-year and first follow-up NLS data, it was found that (1) low SES and minority students are more likely to be recipients of all federal aid taken together, and federal loan borrowers, college work-study recipients, and federal transfer benefit recipients in particular, (2) federal grants and scholarships tend to be distributed according to student ability; (3) public two-year and vocational institutions lack financial aid expertise; (4) students attending private four-year colleges receive most types of federal aid; and (5) recipients of combined federal/non-federal aid packages tend to be lower SES or minority students, while recipients of non-federal aid only tend to be higher SES students.
Classification: Postsecondary education (access: financial aid)

208
Thomas, G. E. *College characteristics and black students' four-year college graduation.* An empirical evaluation, The Johns Hopkins University, Baltimore, Maryland, December 1980. (Abstract)

This study employed recent national data to evaluate the effects of college characteristics and individual level variables on the success of black students in completing a four-year college on schedule or within four consecutive years. The

results indicated that the financial aid status of the colleges that black students attended was the most critical college characteristic for prompt graduation. Specifically, net of family background, standardized test performance, high school rank, and colleges with increasing amounts of student grant and loan aid had a significant positive effect on black student college graduation. Attending a predominantly black four-year college also had a positive effect on prompt college graduation for black students net of pre-college variables. However, most of the effects of black college attendance on the major dependent variable for blacks was indirect and mediated by college grade performance. For both black males and females college grade performance was the single most important predictor of prompt graduation. The policy and research implications of these findings are discussed.
Classification: Postsecondary education: (access: race and sex differences; performance)

209
Thomas, G. E. *Race and sex effects in the process of educational achievement.* Unpublished doctoral dissertation, University of North Carolina, Chapel Hill, North Carolina, 1975.

This study investigates the attainment process of blacks and women. A subsample of black and white males and females was drawn from the NLS, and a four-variable model—SES, academic ability, high school class rank, and college attendance—was used. Three sets of analyses were performed—parallel regression analysis, path analysis with race and sex as dummy variables, and Goodman's nonparametric analysis. Results include: (1) when background variables are controlled, blacks are more likely than whites to attend college; (2) more white males than white females go to college, but among blacks the college-going rate is higher for females.
Classification: Postsecondary education (access)

210 ED 164 654
Thomas, G. E. The influence of ascription, achievement and educational expectations on black-white postsecondary enrollment. *The Sociological Quarterly*, 209-222, Spring 1979.

This study examines the effects of ascription, achievement and educational expectations on the type of college attended by blacks and whites who participated in the 1972 National Longitudinal Survey. Variables used in past models of schooling were important in determining the type of college that students attended, but in contrast to most past models, the effects of SES and standardized test performances were almost equal for blacks and whites. Findings indicate that racial differences in the model's predictability were lower than differences observed in most past models of schooling. Previous observations of higher enrollment by blacks than whites in two-year colleges held only to a limited extent for blacks and whites in the aggregate, but was completely reversed when controlling for SES and standardized test performances.
Classification: Postsecondary education (access: race and sex differences)

211
Thomas, G. E. Race and sex differences and similarities in the process of college entry. Baltimore, Maryland: The Johns Hopkins University, Center for Social Organization of Schools. Reprint from *Higher Education*, 1980.

This study evaluates the process of college entry for race and sex groups as predicted by an elaboration of the Blau and Duncan (1967) status attainment model. Four important observations were derived from the study. First, sex differences among blacks, which have not been previously examined, were less pronounced than sex differences among whites. Secondly, race effects were more influential than sex in affecting the process of college entry. Thirdly, for all groups the effects of race, sex, family status origin (SES) and standardized test performance on college attendance were substantially mediated by school process variables (e.g., high school rank and curriculum), by "significant others" influences, and by student educational expectations. Fourthly, the net effects of structural background variables (e.g., SES and standardized test performance) on college attendance were much stronger for blacks (particularly for black males) than for whites.

Data for this analysis are from a subsample of 13,925 black and white males and females who participated in the Base-Year (1972) and First Follow-Up (1973) of the NLS.
Classification: Postsecondary education (access: basic patterns in college attendance)

212
Thomas, G. E. *Student and institutional characteristics as determinants of prompt college graduation for race and sex groups.* Baltimore, Maryland: The Johns Hopkins University, December 1980. (Abstract)

Recent national data were used to examine the

impact of individual and institutional level variables on the ability of race and sex groups to complete a four-year college promptly or within four consecutive years. The results indicated that the characteristics of the college that students entered were of significant consequences in affecting college graduation for females but not males. Specifically, attending a private college was a prime predictor of the major dependent variable for white females, while attending a selective college was a prime predictor for black females. These institutional measures had a negative and largely direct effect on prompt graduation for females. For males, college grade performance was the single most important predictor of prompt graduation. College grade performance was also a primary predictor of the major dependent variable for females. Its impact was somewhat stronger for blacks than whites.
Classification: Postsecondary education (performance)

213
Thomas, G. E., Alexander, K. L. & Eckland, B. K. Access to higher education: The importance of race, sex, social class, and academic credentials. *School Review*, 87 (2), 133-156, February 1979.

The purpose of this study is to evaluate conditions of access to higher education particularly with regard to race, sex, and social class. The data for the analysis are from a subsample of 13,618 black and white males and females who participated in the base year (1972) and first year follow-up (1973). Standardized regression coefficients (or beta weights) were used to estimate the "net effects." Four different structural models were used for estimating race, sex, and SES effects.

Three of the more important issues raised by this study are (1) when blacks are compared to whites of comparable status origins and scholastic aptitude, blacks are more likely to attend college; (2) there is a strong depressant effect of low SES status on college attendance; contrary to common assumption, there is considerable evidence that ability of parents to finance their children's educations accounts for little of the social class difference in patterns of attendance; (3) the findings lead the

emphasis on test scores and more emphasis on grade performance measures; high school grades or class rank measures are far less influenced by family status background and racial status than are scholastic aptitude measures; thus, rank measures are far less influenced by family status background and racial status than are scholastic aptitude measures; thus, selection on the basis of test scores tends to perpetuate social class and race differences in college attendance, while selection on the basis of grade performance does not.
Classification: Postsecondary education (access: race and sex differences)

214
Thomson, D. R. *Postsecondary students: Financial rights, choices, recommendations.* 1976 Statewide Plan. Albany, New York: Office of Postsecondary Research, June 1976. (Draft)

The New York Department of Education utilized a subsample of the NLS comprising over 1,500 students who graduated from New York State high schools to aid in formulating policy recommendations for the 1976 statewide plan.
Classification: Postsecondary education (access: financial aid)

215
Thornton, C. H. *Black-white differences in educational attainment: A replication and expanded interpretation.* Chapel Hill, North Carolina: University of North Carolina, October 1976.

The analysis of this study was limited to black and white males in the National Longitudinal Study. Variables used include SES, ability, educational expectations, educational attainment, significant other influence, and self-esteem. The model holds that the process of educational attainment is a function of the simultaneous interaction between one's socioeconomic background and one's ability, a specific set of intervening factors [i.e., academic performance, influence of significant others (SOI), educational expectations, self-esteem, and the hypothesized behavioral outcome—educational attainment].

The findings show that the process of educational attainment is much more feebly articulated for blacks within the framework of the "basic" model than is the case for whites. This is aptly shown by the coefficients of determination for the separate analysis for blacks and whites when the amount of explained variation for most endogenous variables among whites is about twice that for blacks. It was also found that race, as a main effect, is important throughout each stage of the educational attainment model. Further, the analysis shows that the dynamics of attainment differ by race such that the impact of interpersonal influences and subjective orientations emerges as the only important direct influences on educational attainment for blacks. This is in stark contrast to the role played by both the

background and subjective variables for whites.
Classification: Postsecondary education (access)

216
Thornton, C. H. The educational attainment process: Some important interaction effects. *The Black Sociologist*, March 1977.

The model of educational attainment used in this analysis is similar to Sewell's model of educational attainment, but does not consider the effects of academic performance and "significant others". According to the model, educational attainment is a function of the interrelationships of (1) social structural variables (i.e., race, SES, and ability); (2) educational aspirations; and (3) the hypothesized behavioral outcome—educational attainment.

The analysis makes use of the statistical packaged program NONMET which involves the fitting of a linear model to data arrayed in a complex contingency table using weighted least squares. Analysis, using base-year and first follow-up data from the NLS, is limited to black and white males residing in the southern and northeastern portions of the country.

The following results were obtained: (a) the effects of aspirations on educational attainment for blacks are somewhat smaller than for whites; (b) with socioeconomic status and aspirations held constant, effects of aptitude on educational attainment are more salient for whites; (c) because both aptitude and aspirations are significantly related to educational attainment and the effect of aspirations on the outcome variables is stronger among higher aptitude students, blacks are disadvantaged as compared to whites due to the greater likelihood of whites being in the high aptitude category.
Classification: Postsecondary education (access)

217
Thornton, C. H. *The effects of athletic participation upon college attendance: Some black-white differences.* Baton Rouge, Louisiana: Southern University, Department of Sociology, June 1979.

This study tests hypotheses concerning the positive effects of athletic participation on educational expectations and college attendance as a measure of educational attainment. The study extended previous research by examining the interactions between racial status and the effects of athletic participation.

Findings indicate that encouraging students to participate in high school athletics will promote the development of their educational goals and their rate of college attendance. Such encouragement will affect proportionately more black students and will have a greater impact upon their rate of college attendance. Finally, it should be noted that by adding athletic participation to the more "traditional" variables contained in the educational attainment model did increase the explanatory power of the model proportionately more for blacks than whites. The suggestion is that black mobility is less dependent upon the more "familiar" determinants of achievement than is the case for whites. The results of the findings indicate that non-academic influences, such as significant others, may be more important in predicting educational achievement for blacks than is the case for whites.
Classification: Postsecondary education (access)

218 ED 154 771
Wagner, A. P. & Rice, L. D. *Student financial aid: Institutional packaging and family expenditure patterns* (HEW 75-22). Washington, D. C.: College Entrance Examination Board, April 1977.

The purpose of this study is to utilize data from the National Longitudinal Study, in unique combination with other data resources, to improve the understanding of the effects of student aid in institutional and family decision making, and to suggest which types of aid and distribution mechanism can best meet this objective.

The descriptive statistics provide a broad view of the distribution of different types of student aid to particular student and institutional subpopulations. This report contains a multivariate analysis of the packaging of student aid. Using single equation regression techniques, the sample is partitioned by institution type and control to permit comparisons across sectors. The effect of financial aid (and different types of aid) on parental spending for educational expenses is estimated using multiple regression techniques. The sample is partitioned by family income and institution type and control, permitting a comparison of family behaviors among different subpopulations.

One of the major products of this project is the College Board Linked NLS-Institutional File. Institutional characteristics compiled from HEGIS, Office of Education, and American Council on Education data files for each institution listed by the NLS respondents have been added to every NLS record.

The results of this study attempt to explain the allocative effects of financial aid on institutional and family behaviors. The findings help to illustrate the limits and the promise of student aid—the primary short-run Federal policy instrument—as a means of achieving equal educational opportunity and maintaining diversity in postsecondary education.

Classification: Postsecondary education (access: financial aid)

219

Waldenberg, A. L. *Life after high school: Education and migration decisions* (OE-300-75-0382). New Haven, Connecticut: Institute for Demographic and Economic Studies, Inc., 1976.

Using the NLS Class of 1972 sample, 1970 Census data, and information on postsecondary institutions from several sources, this analysis focuses on the impact of labor market conditions on work and schooling choices, as well as migration. The basic labor market descriptors include unemployment rates for 18-year-olds and for adults, and earnings profiles. These data are SMSA and county group specific, and they are disaggregated by race, sex, and educational attainment. It is assumed that these data are the basis on which young people formulate their expectations about the pecuniary costs and benefits of investing in education and migration activities.

The analysis focused on white males, but was extended to other races and to females. In the case of females, the analysis incorporates marital and fertility choices which are expected to interact with postsecondary investment choices. This research was extended to the IDES-ACT sample of young people, where actual survey data are available on individual perceptions and expectations of labor markets.

Classification: Postsecondary education (access, performance); labor force participation

220

Weaver, Timothy W. In search of quality: The need for talent in teaching. Boston, Massachusetts: Boston University, School of Education. (Reprinted from *Phi Delta Kappan*, September 1979.)

The purpose of this research is to investigate three conditions presumed to be interrelated: (1) a decline in the job market in teaching; (2) a shift in student preferences away from the field of education; and (3) a sharp decline in test scores of college-bound students and enrolled freshmen who intend to study in education, and a pass-through of the score decline to graduating seniors and to those who find teaching positions. Findings indicate that programs undergoing market stress in teacher education have responded by lowering academic standards to attract more students. The result has been a significant net decline in the academic quality of students entering the field of education.

Among graduating college seniors in the National Longitudinal Study (NLS) sample, class of 1976, education majors ranked fourteenth out of 16 fields (including "other" and "undecided") on SAT verbal scores. The only two groups of graduating seniors with lower SAT-V scores than teachers were those studying in office-clerical and vocational-technical fields. A comparison of the NLS sample of education majors, class of 1976, who did and did not find teaching jobs shows that on four of five measures of competence in math, reading, and vocabulary, those not teaching (presumably employed elsewhere) have higher test scores than those teaching. It is important to note that the process of teacher selection and placement does not result in more academically competent teachers being selected. It is not clear whether the choice rests with the education major (more academically gifted students may not seek teaching positions) or whether the choice is primarily determined by employers. It is clear that a large majority of the 1976 education majors sought teaching positions. It is interesting to note that the teaching candidates who were hired did have slightly higher grade-point averages than those not hired (2.86 versus 2.79), perhaps suggesting that employers do use grades as a measure of academic performance and as a guide to hiring teachers.

Classification: Postsecondary education (performance); personal, career, and psychological development

221 ED 169 806

Wisenbaker, J. M. *South Carolina college council study of financial aid: Base year trends*. Research Triangle Park, North Carolina: Research Triangle Institute, September 1978.

The basic purpose of this report is to provide tabulated data from the South Carolina Comparison Group to the South Carolina College Council to be used in a larger study of students' financial aid patterns. The South Carolina Comparison Group is composed of postsecondary school students from South Carolina, North Carolina, Georgia and Tennessee who are a part of the NLS sample.

Findings show that the South Carolina group differed from those in other states in that a greater percentage was black, came from families earning less than $9,000 per year, had fathers with less than a high school education, and were in the lower aptitude quartile. Finally, a smaller percentage of those in the South Carolina Comparison Group attended public two-year colleges. Only for two-year college attendees in the South Carolina Comparison Group

did the relative importance of the various factors substantially differ. For those in public two-year colleges, parents' advice was the most important factor in institutional choice.
Classification: Postsecondary education (access)

222
Wolfle, Lee M. *Path analysis with categorical data: Applications to education.* Virginia Polytechnic Institute and State University. Paper prepared for presentation at the annual meetings of the American Educational Research Association, Boston, Massachusetts, April 7-11, 1980. (Supported in part by the National Center for Education Statistics, U.S. Department of Education, No. 300-78-0516)

The purpose of this paper is to illustrate an educational application of path analysis with categorical data; in order to do so, consideration will be given to the problem of withdrawal from institutions of higher education. Three variables were considered causal antecedents of college withdrawal: respondent's race, ability, and college grades.

Findings indicate that withdrawal from colleges and universities depends upon the additive effects of ability and grades, but not race. Those students with lower grades and less ability are more likely to withdraw from college and these effects of ability and grades are independent of race.
Classification: Postsecondary education (performance); methodology (imputation and analysis strategy)

Secondary Education

223
Ahern, D. W. *Equality of educational opportunity—National longitudinal study of the high school class of 1972.* Unpublished doctoral dissertation, University of Maryland, University Microfilms International, Ann Arbor, Michigan, 1976.

This study investigates the equality of resources in relation to equality of outcomes. Variables involved are school facilities, teacher characteristics, learning resources, library, SAT scores, and measures of student self-esteem and locus of control.
Classification: Secondary education (school or program effects)

224
Beaton, A. E., Hilton, T. L., & Schrader, W. B. *Changes in the verbal abilities of high school seniors, college entrants, and SAT candidates between 1960 and 1972.* Paper prepared for the Advisory Panel on the Scholastic Aptitude Test Score Decline, jointly sponsored by the College Board and Educational Testing Service, June 1977.

This study investigates differences between the 1960 and 1972 high school graduating classes—differences that may help to account for the SAT score decline. Characteristics of three groups of high school students—all high school seniors, college entrants, and SAT candidates—are described.

Findings indicate the following changes in the SAT population:

(1) A marked increase in the proportion of women candidates,
(2) A small increase (5 percent) in the proportion of "general" students and an equal decrease in the proportion of college preparatory students,
(3) An increase in the proportion of students from larger families,
(4) Increases in the proportion of students planning to major in the social sciences and humanities and certain undergraduate career programs and a decrease in engineering majors, and
(5) A substantial decrease in the proportion of SAT takers who attended four-year colleges.

On both tests, almost every subgroup of students who took the SAT showed some decline in scores. Among the groups that showed a slight increase or a relatively small decline were students younger than 17½ years, students whose parents had education beyond high school, students who expected to major in science or mathematics in college, or in some field other than liberal arts and engineering, students whose mothers were employed in white collar or blue collar occupations, and students who entered four-year colleges.
Classification: Secondary education (school or program effects)

225 ED 171 847
Crain, R. L., & Mahard, R. D. School racial composition and black college attendance and achievement test performance. *Sociology of Education,* Vol. 51, April 1978.

This analysis of the relationship between high school racial composition and college attendance for black students reveals a regional interaction effect. Using schools in the NLS sample as analytical units, multiple regression analysis indicated that black graduates of predominantly white high schools in the North are more likely to attend college than are their southern counterparts, and they are far more likely to remain in college. Results also indicate higher achievement test scores for blacks attending predominantly white high schools, but only in the North.

The authors discuss possible explanations for these and other regional differences apparent in the study and make subsequent recommendations for educational policy. They also suggest replication of their study and further research involving attitudes of students and teachers toward interracial contact and toward college attendance. Hypotheses for further research are listed.

Classification: Secondary education (school or program effects); postsecondary education (access)

226 ED 115 691

Creech, F. R. *A vocational re-evaluation of the base-year survey of the high school class of 1972, Part I: Selected characteristics of the class of 1972* (Contract No. OEC-0-73-6806). Princeton, New Jersey: Educational Testing Service, October 1974.

This report highlights the educational characteristics of NLS students, including the following results:

1. (1) About half of the white students are enrolled in academic programs as compared to a quarter of the black students. About 44 percent of blacks as compared to 29 percent of whites are enrolled in general curriculum programs.
2. (2) The median class standing of females is substantially higher than that of males, and vocational-technical students are about 6 percent higher than general students in class standing.
3. (3) Students in federal programs have slightly higher academic ability scores than students in the same curriculum who do not participate in federal programs. Self-reported grades, however, do not reflect this advantage.
4. (4) About one-third of the population may be facing financial barriers to their continued education. Relatively large numbers of students are ignorant of many potential sources of financial aid. There is a relationship between the student's use of financial aid sources and the frequency with which counselors recommended such resources.

Classification: Secondary education (student characteristics); postsecondary education (vocational-technical education)

227

Creech, F. R., Echternacht, G. J., Freeberg, N. E., & Rock, D. A. The high school class of 1972: Selected characteristics, plans, and aspirations—an overview of findings. *Public Data Use, 3*,(4), 31-40, October 1975.

This article summarizes selected characteristics of the high school class of 1972, with special emphases devoted to vocational students and how they may be distinguished from students in other curricula. Three sets of analyses are included:

(1) Educational characteristics of students and selected univariate explorations,
(2) Multivariate explorations distinguishing vocational-technical students from others, and
(3) Student vocational and educational plans and aspirations.

Classification: Secondary education (student characteristics, school or program effects)

228 ED 115 692

Echternacht, G. J. Characteristics distinguishing vocational education students from general and academic students. *Multivariate Behavioral Research, 11*(4), 477-490, 1976.

This study attempted to identify variables from a lengthy omnibus questionnaire and a set of test scores that would distinguish students in high school vocational education programs from those in academic and general programs. The sample of 16,409 students was selected from a national probability sample. Analyses were performed for five groups, and all results were cross-validated. The results indicated that vocational students were lower than academic students in tested academic ability. Although vocational students were as low in academic ability as were general students, vocational students achieved higher school grades, were less alienated, and focused more on the work world.

Classification: Secondary education (student characteristics)

229 ED 115 715

Echternacht, G. *A vocational re-evaluation of the base-year survey of the high school class of 1972, Final report-Part II: Characteristics distinguishing vocational students from general and academic students* (PR-75-3). Princeton, New Jersey: Educational Testing Service, February 1975.

This study identifies distinguishing characteristics of high school vocational students. Factor analyses and discriminant analyses techniques were employed. Results indicate that academic students have higher academic ability than general and vocational students; vocational students are less alienated from school and more work-oriented than

general students; and proportionally more women and whites are enrolled in vocational programs than in general programs.
Classification: Secondary education (student characteristics)

230
Eckland, B. K. School racial composition and college attendance revisited. *Sociology of Education*, April 1979.

This study is a comment on an article by Crain and Mahard entitled "School Racial Composition and Black College Attendance and Achievement Test Performance." The article, based on NLS data, reported that the effects of high school desegregation for blacks on school achievement and college attendance were negative in the South and positive in the North. Using the same data but re-specifying the model, Eckland found markedly different results. Among those findings are that the negative consequences for blacks of attending a predominantly white high school are not on college attendance but on high school grades and curriculum placement. Contrary to Crain and Mahards' conclusions the deleterious effects of school desegregation not only appear in the North but are more severe there than in the South.
Classification: Secondary education (school or program effects); postsecondary education (access)

231 ED 151 391
Fleming, E. L., Jr., Maroney, R., & Straser, M. L. *The vocational re-evaluation of the National Longitudinal Study of the High School Class of 1972—Base-year.* Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., April 1975.

This paper describes analyses in vocational education to explore the NLS data. The following sections are included: (1) educational characteristics of high school students; (2) differences between vocational-technical students and others; (3) vocational and educational plans and ambitions.
Classification: Secondary education (student characteristics)

232 ED 111 886
Freeberg, N. E., & Rock, D. A. *A vocational re-evaluation of the base year survey of the high school class of 1972, Part III: Aspirations and plans of high school students: The role of academic, social, and personal characteristics* (PR-75-5). Princeton, New Jersey: Educational Testing Service, February 1975.

This study examines the plans and aspirations of high school students for their educational and vocational future and the influences that may have had a role in shaping those decisions. In an attempt to explain the complex role of a variety of family, personal, peer, and school characteristics, different analytical approaches were found to be applicable as a function of the particular questions being posed and the nature of the available information. Thus, it was important, initially, to define specific educational and vocational objectives perceived by the student, the relative value or priority that the student assigns to each, how the student claims to arrive at those decisions, and how he or she is likely to apply them in shaping his post-high school strivings. Prior evidence of the importance of sex differences in this regard and a serious research gap in knowledge of the extent to which curriculum group membership is reflected in the formulation of plans and aspirations define the focus of the report.
Classification: Secondary education (student characteristics, school or program effects)

233
Furr, J. D. *The relationship between high school reading and math achievement levels and later life experiences: Implications for minimal competency testing.* Doctoral dissertation, University of North Carolina, Chapel Hill, North Carolina, 1978.

This study investigated the relationship between high school reading and math achievement and the later life experiences of average and below average achievement high school graduates.

The data sources for the study were the base year, first follow-up and second year follow-up surveys of the NLS. The NLS Student Test Book reading and math achievement scores were used to determine the subjects' achievement levels for the reading, math, and read/math (the average of the reading and math scores) achievement variables.

The author found that for average and below average achievement students little relationship existed between high school reading and math achievement and later life experiences. A discussion of the findings included a call for further research in the area of basic skills so that the appropriate minimal competency testing objectives can be set. Without further research, the author points out that this type of student may be labeled "incompetent" in tasks that bear little relationship to later life experiences.
Classification: Secondary education (school or program effects)

234

Gelb, J. *Beyond the academic, non-academic dichotomy: High school curriculum effects and educational attainment* (Report No. 273). Baltimore, Maryland: The Johns Hopkins University, Center for Social Organization of Schools, March 1979.

This report, prepared by the School Process and Career Development Program, is part of an examination of the effects of high school curriculum on educational attainment. The results of the inclusion of detailed measure of curriculum placement in a path model of educational attainment is analyzed using NLS data. This model is compared to one which employs the conventional curriculum variable, which distinguishes between college and noncollege track students only. Findings suggest that (1) there are substantial differences between noncollege tracks, but (2) these differences do not add appreciably to the explanatory power of conventional attainment models. A detailed knowledge of curriculum placement is shown to have some value in explaining race and sex differences in attainment, but the findings suggest that only research specifically concerned with high school effects on attainment need employ the more detailed measure of curriculum enrollment.

The sample for this study is limited to black and white respondents from the base-year through second follow-up who had no missing data.

Classification: Secondary education

235

Gilford, D. *The noncollegiate sector: Statistical snapshots of adult continuing education.* Talk presented at the Association of American Higher Education, proceedings, 29th National Conference of the AAHE, Chicago, March 1974.

This paper describes the character and extent of education in some noncollegiate postsecondary institutions and presents data on the educational and employment aspirations of the high school class of 1972.

Classification: Secondary education (student characteristics)

236 ED 123 755

Grant, W. V., & Lind, C. G. *Digest of education statistics, 1975 edition* (NCES 76-211). Washington, D.C.: U.S. Government Printing Office, 1976.

The purpose of this annual publication is to provide an abstract of statistical information dealing with American education from prekindergarten through graduate school. Tables and information based on the NLS data appear on pages 61, 62, and 171.

Classification: Secondary education (student characteristics); postsecondary eduation (access); labor force participation

237

Hanks, M. Race, sexual status and athletics in the process of educational achievement. Murray State University. *Social Science Quarterly*, 60 (3), December 1979.

This study uses a structural equations model to re-examine the association between high school athletic participation and educational expectations and attainments in which influences of family background status and academic aptitude are controlled, and in which academic performance, significant-other's influence and respondents' self-esteem are specified as mechanisms for mediating the salutary effect of athletic participation on expectations and attainments.

The model incorporates high school athletic participation into a causal schema that otherwise parallels most models of educational or status attainment. This particular model allows for estimating athletic participation effects on two dependent variables, namely, educational expectations and college attendance.

In summary, the major finding is the significant impact of athletic participation on students' educational orientation and actual college-going behavior and the manner in which it is mediated primarily by two specific measures of significant-others' influence, namely, parents' educational encouragement and association with college-oriented peers. This is true for both male and female blacks and whites, and strengthens the evidence that participation in high school athletics has basically salutary effects on the educational achievement of high school students. However, the experience of participating in sports is clearly more important for males of both races than females (especially in regard to the matter of college attendance); and, for white students of both sexes, athletics is also of much greater consequence when social class status and academic aptitude are uniformly low.

Classification: Secondary education (student characteristics)

238

Kominski, R. *Educational aspirations of high school seniors.* Paper presented at the Midwest Sociology Society, Minneapolis, Minnesota, April 1981.

This paper attempts to extend the tradition of status attainment research which incorporates social-psychological variables; specifically the educational aspirations of the NLS sample members. This analysis, as in previous models of this sort, demonstrated the inability of status attainment models to explain the aspirations of blacks as effectively as they do for whites. Additionally, there was not a great deal of difference from the models estimated here and ones of the past. While some variations do emerge, overall, the models were rather consistent with those estimated using different data, both in form as well as with respect to explanatory power.

This research echoes the basic finding of previous research that the determination of personal aspiration is a product of many forces. Results of the various effects of variables, across different subgroups, are presented and discussed. Most notable in this analysis was the crucial role of mother's desires and the two self-assessment variables. Their strong and consistent role in the models verify their importance as key factors in aspirations formation. A second important point concerns the distinction of the black male model from the other three groups (white males, black females, and white females). It is not only that the black model is less predictively efficient; it is also important that the model itself is substantively different from that of the other three groups. While differences did exist in the models of these other three groups, they were generally consistent, particularly for white males and females. These models tend to emphasize both social-psychological and education-related factors (grants, coursework, occupations, aspirations, SES). The black male model differs in that the social-psychological factors continued to play a key role but the education related factors do not.

NLS data used were primarily from the first wave although some data from the second wave were used to correct for missing data—over 20,000 usable respondents were in this produced data set.
Classification: Secondary education (student characteristics)

239
Lindsay, P. *Effects of quantity and quality of schooling.* Doctoral dissertation, University of North Carolina, Chapel Hill, North Carolina, 1978.

This research examines some effects of quantity and quality of high school education on college attendance, college selectivity, and academic performance in college. Based on data from the National Longitudinal Study of the High School Class of 1972, parallel analyses are done at the individual and the school levels. A status attainment model works reasonably well in explaining this segment of the educational process, at both levels of analysis. When black and white samples are analyzed separately, quantity of schooling is found to influence college attendance of blacks, but not whites. Differences in results from earlier research on the effects of quantity of schooling at the school level are apparently due to differences in research design. Quantity of schooling has some effects once college selectivity, for both blacks and whites. The educational attainment processes examined here indicate a diminishing of racial inequality, while, at the same time, social class inequality persists. This research also explores a number of similarities and differences in the attainment process for blacks and whites. Finally, by conceptualizing college plans as an antecedent rather than a consequence of high school curriculum enrollment and grades, this study elucidates some of the processes of schooling and reveals further race differences.
Classification: Secondary education (school or program effects)

240
Lindsay, P. *The effect of high school size on student participation, satisfaction, and attendance.* Greensboro, North Carolina: The University of North Carolina, September 1980. (Research supported in part by a grant from the Research Council of the University of North Carolina at Greensboro)

Research on schools and other organizations, as well as recent experience, suggests the usefulness of empirical examination of the assumption that bigger schools are better schools. This study tests the hypothesis that student participation, satisfaction, and attendance will be higher in smaller schools, using a representative national sample of seniors in public and private high schools in the United States. Rates of participation in four types of extracurricular activities, two measures of student satisfaction, and attendance are found to be higher in smaller schools, using a representative national sample of seniors in public and private high schools in the United States. When students' socioeconomic status, academic ability, and rural or urban residence are controlled, the results continue to show persistent effects of school size.

Data are utilized from the base year survey of the NLS for those students who completed questionnaires and aptitude batteries.
Classification: Secondary education (school or pro-

gram effects)

241
National Center for Education Statistics. *The relationship between participation in mathematics at the high school level and entry into quantitative fields—Results from the national longitudinal study* (NCES Bulletin 79-228). Washington, D.C.: National Center for Education Statistics, August 1979.

This bulletin summarizes (1) data collected in the NLS base-year survey relative to completion of math courses at the high school level and math achievement test scores in the senior year of high school; and (2) data collected through the second follow-up survey relative to participation in higher education and major field of study.

Findings summarized in this bulletin indicate some disadvantage for ethnic minorities in terms of achievement test scores at the high school level, but a continuing disadvantage for women at four levels: (1) lower basic math skills competency; (2) fewer math courses for a given level of math competency; (3) a lower entry rate into quantitative fields for a given number of math courses; and (4) a lower rate of persistence in quantitative fields for women who enter them.

Classification: Secondary education (school or program effects); postsecondary education (performance)

242
Noell, J. *Students' attitudes toward their high school education.* In progress, Washington, D.C.: National Center for Education Statistics, 1977.

The basic purpose of this proposed study is to discover and analyze the factors that affect students' attitudes toward their high school education. The hypothesis to be tested deals with characteristics of the school as they contribute to students' attitudes. A regression analysis will be used to assess the absolute and relative significance of personal and school factors in determining students' attitudes toward their education.

If student's attitudes can be shown to be largely a function of school variables—such as curriculum or facilities or teacher characteristics (as opposed to cognitive skills which are apparently largely determined by a student's socioeconomic class)—a foundation for improved education policies will have been established.

Classification: Secondary education (school or program effects)

243
Peng, S. S. An assessment of job training programs in American high schools. *Phi Delta Kappan*, May 1977.

This paper presents background characteristics of job training program participants, and application and evaluation of training. Differences in occupational attainment between participants and nonparticipants are also examined.

Classification: Secondary education (school or program effects)

244
Rosenbaum, J. E. Track misperceptions and frustrated college plans: An analysis of the effects of tracks and track perceptions in the national longitudinal survey. Northwestern University. *Sociology of Education*, 53, 74-88, April 1980. (Supported by the Institution for Social and Policy Studies, Yale University)

This study compares the effects of tracking (tracks defined there as the curriculum in which a student is placed according to ability, academic performance, or other variables) in two versions of a status-attainment model, one using students' track perceptions and the other using their actual tracks which were taken from school records, and then combines the two in a single model. Findings indicate that students often misperceive their tracks and that students' track perceptions significantly underestimate tracking's relationship with important antecedents and outcomes. In particular, it finds that tracking has an important influence on students' college attendance after controlling for students' plans, but track perceptions do not. This suggests that although tracking frustrates many students' plans to attend college, students' incorrect perceptions of their track placements make them less able to anticipate that this will happen. The methodological implications of this analysis for tracking research are considered, and some speculations are offered about how track misperceptions may originate and how they may influence the operation and stability of track systems.

Classification: Secondary education (school or program effects); postsecondary education (patterns of college attendance); personal, career, or psychological development

245
Ross, P. J. *Educational and occupational profiles for U.S. high school seniors in the class of 1972.* Paper presented at the annual meeting of the Rural

Sociology Section, Southern Association of Agricultural Scientists, Houston, Texas, February 1978.

The purpose of this paper is to describe both preferences and behaviors associated with educational and occupational goals of seniors in the class of 1972. National population estimates are presented (1) for educational and occupational preferences of seniors during Spring, 1972; and Fall, 1974; and (2) for the educational and/or occupational activities at the latter time period. The major analytical concern is to examine the association between community of residence and the educational and occupational variables when differences in sex, ability, and socioeconomic status are taken into consideration. Attention is given to the effects of rural-urban residence on educational and occupational orientations and experiences.

A conclusion suggested by the results is that occupational orientations of 1972 high school seniors are not only incongruent with their early adult behaviors but are vastly inconsistent with the realities of job market possibilities. More than 1/3 of the 1972 students expected to be employed in professional and related jobs by age 30. This compares to only 15 percent of the civilian labor force and 12 percent of employed persons who were actually working in professional and related jobs in 1970.

Classification: Secondary education (student characteristics)

246 ED 110 512

Schrader, W. B., & Hilton, T. L. *Educational attainment of American high school seniors in 1960, 1965, and 1972: Feasibility study* (NIE Project No. NIE-6-74-0050). Princeton, New Jersey: Educational Testing Service, April 1975.

Project TALENT, the Equality of Educational Opportunity Survey, and the base-year survey of the National Longitudinal Study tested national probability samples of American high school seniors in 1960, 1965, and 1972, respectively. This study is concerned with the feasibility of using these data for studying trends in educational attainment.

A detailed review of sample selection, weighting, and school participation showed that the data would provide a sound basis for comparing performance, and identified certain implications of the existing data for making and interpreting comparisons. Comparisons made of students' high school experiences, their educational and occupational aspirations and plans, and their parents' education and occupation indicated that comparisons of test performances of the groups would be warranted. Finally, a detailed design was prepared for studying the equivalence of selected tests used in the three surveys and for equating test scores on pairs of equivalent tests.

Classification: Secondary education (student characteristics, school or program effects); methodology (measurement property)

247

Thornton, C. H. *More on the effects of school desegregation.* Baton Rouge, Louisiana: Southern University and A & M College, 1980.

This study examines the effects of school desegregation upon the college going experiences of black students. This is done within the context of the general status attainment model where the author systematically controls for the social status and ability as well as racial composition of these schools. The results reveal that black students are generally disadvantaged in desegregated schools and that this disadvantage is increased as the general social status and ability levels of the students comprising these schools decrease. It is concluded that while black college attendance is facilitated in black schools that are comprised of high ability and high SES students, school racial desegregation is facilitative of black college attendance, but only to the extent that it also implies socioeconomic integration, which yields "net" positive benefits for black students.

Classification: Secondary education (school or program effects)

248

Thornton, C. H., Jr. *The effects of high school contexts upon black and white college attendance.* Dissertation, University of North Carolina, Chapel Hill, North Carolina, 1978.

The goal of this study is to present and examine a causal model of effects of school context upon college attendance. Three dimensions of school context will be considered: socioeconomic (SES) context, ability context, and racial context. The theoretical perspective of the status attainment research tradition is the foundation from which the causal model is derived. It will also serve as a basis on which to evaluate the results of our model. The first objective is to review the major findings of the status attainment research tradition. The second objective is to examine the relative fruitfulness of the inclusion of school contextual variables into the educational attainment model.

The sample used in the present analysis is derived from the NLS Base Year Study, conducted the

Spring of 1972 and the First Year Follow-Up Study, which was conducted between October 1973 and March 1974. From these data, the sample was limited to black and white males for whom we had measures of ability test scores.

The major conclusions of this study are as follows: (1) college attendance for whites is mildly facilitated in low ability and high SES schools, with no effects stemming from racial context; and (2) black college attendance is promoted within high SES and high ability schools with decreasing numbers of white students.

Classification: Secondary education (school or program effects)

249

Thornton, C. H. & Eckland, B. K. High school contextual effects for black and white students: A research note. *Sociology of Education*, 53, 247-252, October 1980.

The differential effects of high school socioeconomic status (SES) and ability contexts upon the school and college-going experience of white and black males are examined.

The data are drawn from the base-year and first follow-up surveys of the National Longitudinal Study of the High School Class of 1972 (NLS). Because the primary interest is examining black-white differences in school contextual effects, the authors excluded other minority group students (who comprise about 8 percent of the total NLS sample). Also, the sample was restricted to 791 black and 5,606 white males.

The authors found that the results for whites cannot be generalized to blacks. First although academically competitive environments tend to depress the relative grade performance of blacks (just as they do for whites), the long-term consequences are negligible. When about to graduate, blacks are less likely than whites to judge academic ability and chances for college on the basis of the point average grade received in high school. Second, the long-range consequences of the SES context of high school are slightly stronger for blacks than whites, mainly because of a stronger unmediated effect on the college attendance of blacks, independent of curriculum placement, peer association, contact with teachers or counselors, and even college plans.

Classification: Secondary education (school or program effects)

Women

250

Anderson, J. L. *Work plans and fertility expectations of teenage women: Some tests of possible interpretations*. Unpublished doctoral dissertation, Columbia University, 1977.

Studies in the past have found that, in modern industrial society, there is a negative association between labor force participation and fertility among married women. Complex methodological problems have so far made it impossible to demonstrate a causal effect of labor force participation on fertility.

In an attempt to eliminate the influence of actual fertility on work decisions, this study deals with the relationship between expected family size and anticipated work status at age 30 among a nationwide sample of young women in their late teens. The study attempts to test various interpretations of the relationship using additional variables.

Most of the items analyzed are from a questionnaire sent out in October 1973. The question on number of children expected elicits numerical replies, from which mean expected family size is calculated. The question on expected work status at age 30 yields two substantive categories: those who expect to be in paid employment ("working"), and those who do not ("not working").

As anticipated, a negative association is found between expected work status at age 30, when most of the respondents will have young children, and expected fertility. Discussion of various interpretations of the results are discussed.

Classification: Women; labor force participation

251

Eldridge, M. D. *A comparison of women's faculty salaries and earned degrees*. Paper presented at the annual meeting of the American Statistical Association, San Diego, California, August 1978.

This paper discusses trends in the employment of women by institutions of higher learning over the past 15 years, citing various studies sponsored by the National Center for Education Statistics. The number of women faculty was found to have increased since the early 1960's, but broad discrepancies remain in administrative salaries for men and women and in the number of tenured men and women faculty.

In an effort to predict future entry of women into college teaching and other traditionally male-dominated fields, statistics on recipients of degrees from four-year institutions since 1970 were examined. Substantial increases were evident in the number of women receiving degrees in male-dominated fields, suggesting that this trend in academia may carry over into the professional sphere.

Findings from NLS data are cited which indicate that women's entry into male-dominated fields is determined by academic ability and experiences, rather than by any discernable background influence.

Classification: Women; labor force participation

252

Falk, W. W., & Falkowski, C. K. *Status orientation of young women in the U.S.* Louisiana State University. Paper presented at the Fifth World Congress for Rural Sociology, Mexico City, Mexico, August 1980. (Supported by funds from the Louisiana Agriculture Experiment Station)

An analysis is presented for white, black and Mexican-American young women, with a special focus on their early life plans. Posited is a flow of variables originating with parental statuses, moving onto high school tracks and grades, and culminating in life plans measured in the immediate post high school year and again three years later (four years after anticipated high school completion). The authors were interested in how early life plans (marital, fertility, educational, and occupational plans) predict themselves and predict each other; in this latter case, their model cross-lagged the variables to estimate how well seemingly related variables predict each other at different points in time.

Using data from the NLS second and third follow-ups, the authors regressed marital, fertility, educational, and occupational plans in 1973 (one year after anticipated completion of high school) on familial and schooling variables and then regressed all of these on the 1976 life plan variables.

Results indicated that the early life plans were best predicted for whites, with blacks next and Mexican-Americans last. For the 1976 measures, results were remarkably similar for all groups.

Classification: Women; postsecondary education (access: race and sex differences); personal, career, or psychological development

253

Falk, W. W., Falkowski, C. K., & Hansen, G. L. *Attitudinal stability in the formation of life plans: A tri-ethnic comparison among young American women.* Paper presented at the annual meeting of the Rural Sociological Society, Ithaca, New York, August 1980. (Supported by funds from the Louisiana Agriculture Experiment Station)

This paper addresses two issues: (1) How similar or different are the distributions of young American women when we examine their early life plans? In what ways do they vary in their occupational, marital and fertility plans when we control for race/ethnicity and residence (rural-urban)? and (2) If we know the attitudes of young women in the year immediately following high school completion, how well can we predict these same attitudes three years later? The use of NLS data from the second and third follow-ups provided a test of the traditional thesis that rural women of three different races are more traditional than their urban counterparts. After presenting the descriptive data on the comparative distributions by the occupational, marital, and fertility categories, stability coefficients are shown for estimates of how well an attitude at one time can predict a like attitude, as well as theoretically related attitudes at a later time.

Classification: Women; personal, career, or psychological development

254

Meginnis, S. K. S. *Correlation of selected sociodemographic and psychological variables with indicators of sex role orientation of young adult women.* Dissertation, The University of North Carolina, Chapel Hill, North Carolina, 1979.

The author examines factors related to variations in sex role orientation (on a continuum of traditional to contemporary) among young adult women; also the relationships among selected sociodemographic and psychological variables and certain indicators of sex role orientation were studied. Differences in sex role attitudes between black and white women, and among women from four regions of the country and four community types were examined. Subjects were the women respondents to the National Longitudinal Study of the High School Seniors of 1972.

Principal components analysis to examine the intercorrelation of the sex role indicators resulted in two factors, one loaded heavily with educational attainment and aspirations, the other with work goals and sex role attitudes. Canonical correlation analysis of the two sets of variables resulted in six statistically significant pairs of canonical variates.

The findings are discussed and applied to the principles of social learning theory, providing support for the interaction between behavior and environment in the acquisition and performance of

behaviors.
Classification: Women

255
Peng, S. S., & Jaffe, J. *Women who enter male-dominated fields of study in higher education.* Research Triangle Park, North Carolina: Research Triangle Institute, March 1980.

This report presents findings of a study of characteristics of the women who choose to enter historically male-dominated fields of study. Assuming that choice of college major is influenced by family and educational background and resulting attitudes and aspirations, parents' levels of education and their occupations, subjective ratings of the influence of parents and of school personnel on one's choice of high school program and college, lifetime goals, and self-esteem were included in a model attempting to predict choice of college major. The amount of high school preparation in math and science, academic ability as measured by testing, and expectations of specific levels of educational achievement were also included in the model.

Based on this model, it was found that women in male-dominated fields of study, compared with college women in other fields, have greater mathematical aptitude and a stronger high school background in math and science. They also tend to have higher educational expectations and be oriented to success in the world of work. Parental education and occupation does not predict college major differentially for women. With respect to parents' education, father's occupation, high school preparation, educational expectation and self-esteem, women in male-dominated fields are more similar to men in these fields than women in other fields.
Classification: Women; postsecondary education (access)

Other

256
Bailey, J. P., Jr. *National Longitudinal Study of the High School Class of 1972: Base-year, first, and second follow-up data file index: A KWIC-keyword in context index.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, April 1976.

The purpose of this Keyword in Context (KWIC) Index is to list in a particularly useful form the 1,499 variables which appear in the public use file containing respondent information from the base-year, first, and second follow-up surveys in 1972, 1973, and 1974. This index is an integral section of the Data File Users Manual which supports the merged survey file; it is available separately not only as a handy guide to the areas covered by NLS, but also as a reference or source for researchers contemplating purchase of the complete file and its documentation.
Classification: Other (content index)

257
Berry, R. M. *The history, objectives, and design of the National Longitudinal Study of the High School Class of 1972.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana, February 1973.

The major objectives of the NLS expressed by the author are: (1) to supply data needed by national policymakers on student participation in postsecondary education; (2) to see what paths students take in going through various levels and kinds of postsecondary education as compared to their subsequent activities; (3) to obtain statistics that serve as national benchmarks for special studies of educational programs; and (4) to make longitudinal data available to individual researchers while safeguarding the anonymity of survey participants.
Classification: Other (study objectives)

258 ED 135 818
Carroll, S. J., & Morrison, P. A. *National longitudinal study of high school seniors: An agenda for policy research* (R-1964-HEW). Santa Monica, California: The Rand Corporation, June 1976.

The Office of the Assistant Secretary for Planning and Evaluation contracted with the Rand Corporation to develop a research agenda for the National Longitudinal Study. The agenda identifies a broad array of policy issues suitable for research with the NLS, singles out ten high-priority studies, and presents research possibilities for further follow-ups of the class of 1972.

The ten high-priority studies singled out are: (1) influence of the secondary school, (2) migration and job search, (3) attitudes and career success, (4) segmented labor markets, (5) evaluation of career objectives, (6) nontraditional attendance patterns in postsecondary education, (7) persistence and transition patterns of college parallel students in two-year colleges, (8) development of career aspirations and orientations among young women, (9) consequences of early parenthood, (10) near-term marital stability.

The research possibilities fall into four basic areas: (1) individuals' relationships with the labor market, (2) their long-term life outcomes, (3) the intergenerational transmission of effects, and (4) the NLS as a basic investment in the future.

Classification: Other (analysis priority)

259 ED 166 199

Center for Educational Research and Evaluation. *Conceptual model of the national longitudinal study.* Research Triangle Park, North Carolina: Research Triangle Institute, December 1973.

The Analytic Review Series which provided input to NLS included a General Educational Development Model developed by James Trent et al. (UCLA, 1972). The model was modified by RTI to fill the specific needs of NLS, and the relationship between the two models was presented in the conceptual model. The attachment indicates the variables from the base-year and first follow-up instruments used in the NLS conceptual model.

Classification: Other (conceptual model)

260 ED 152 789

Center for Educational Research and Evaluation. *Digest of proceedings of the first planning conference.* Planning conference for the National Longitudinal Study of the High School Class of 1972, Washington, D.C., November 4-6, 1973. Research Triangle Park, North Carolina: Research Triangle Institute, 1973.

The First Planning Conference for the National Longitudinal Study of the High School Class of 1972 was held at the Burlington Hotel in Washington, D.C., over the three-day period, 4-6 November 1973. The purposes were to discuss priorities, to advise about plans for the overall conduct of the study, and to discuss the research priorities and plans for a study of the class of 1977. This document describes the proceedings of the four sessions: Overview, Base-Year Study; Research Design for the First Follow-Up Analysis; Design of the Second Follow-Up; and Design of the 1977 Cohort Study.

Classification: Other (proceedings of planning conference)

261

Center for Educational Research and Evaluation. *Record of proceedings of the second planning conference.* Planning conference for the National Longitudinal Study of the High School Class of 1972, Washington, D.C., April 23-24, 1974. Research Triangle Park, North Carolina: Research Triangle Institute.

The Second Planning Conference for the National Longitudinal Study of the High School Class of 1972 was held at the Burlington Hotel in Washington, D.C., over the two-day period, 23-24 April 1974. Its purpose was to discuss progress, priorities, and NLS goals as well as to advise about plans for the overall conduct of the study. The report, a transcription of a recording of the meetings, gives a detailed account of the four sessions: Review of Progress, Implications of NLS in Issues Facing the Public Schools and in Career Education Issues, Issues Facing Public Systems and Private Institutions of Higher Education, and Priorities for Data Analysis.

Classification: Other (proceedings of planning conference)

262

Center for Educational Research and Evaluation. *The national longitudinal study: A planning conference for new cohorts of high school sophomores and seniors to start in 1980.* Research Triangle Park, North Carolina: Research Triangle Institute, August 1977.

This document describes the 1977 Washington, D.C., planning conference for proposed new cohorts to the NLS (now known as High School and Beyond), and contains (1) a directory of National Planning Committee members, (2) a listing of others attending the conference, (3) the conference agenda, (4) a concise summary of proceedings for the entire conference, and (5) an edited, annotated transcript of the final recommendations of the NLS National Planning Committee.

Classification: Other (proceedings of planning conference)

263

Davis, J. A. *NLS in a perspective of psychometric history.* Discussant comments presented at the annual meeting of the American Association of the Advancement of Science, San Francisco, 1974.

This paper distinguishes the NLS strategy from that of prior longitudinal studies of educational development, principally Project TALENT, as relying on significant fact-of-life events rather than evoking an array of conceptual traits and scaling metrics out of psychometric experience. Thus, it is specifically behavior oriented, not construct oriented, and causal analyses may more directly involve a specific behavior.

Classification: Other (conceptualization)

264 ED 151 389

Davis, J. A. *Potentials of the NLS data base for issue-oriented analyses and for influencing educational policy decisions.* Paper presented at the annual meeting of the American Psychological Association, Washington, D.C., 1976.

The paper discusses the potentials of the NLS data, with the emphasis on determining or examining critical issues in educational policy at the federal level.

Classification: Other (potentials of data base)

265 ED 151 388

Davis, J. A., & Collins, E. F. *Objectives, design, and history of the national longitudinal study.* Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., April 1975.

This paper summarizes the history and the objectives of the NLS. Two objectives are emphasized: (1) to provide a data base for policy decision, and (2) to provide social scientists and scholars a data base for advancing knowledge in human development.

Classification: Other (history, objectives)

266

Eckland, B. K. The efficient use of educational data: A proposal for the National Longitudinal Study of the High School Class of 1972. In C. E. Bidwell & D. M. Windham (Eds.), *The Analysis of Educational Productivity* (Vol. 2). Cambridge, Massachusetts: Ballinger Publishing Company, 1980.

This report comprises the third chapter of the book, *The Analysis of Educational Productivity.*

The chapter begins with an overview of some of the unresolved issues in educational research. It ends with a proposal for a multipurpose longitudinal study of the high school class of 2002, but beginning in the first grade—that is, in 1990. In between the opening and closing sections, the author takes the reader on a personal journey through his experiences in the past several years as a consultant for the National Longitudinal Study (NLS) of the High School Class of 1972. His purpose in doing so is to note the kinds of methodological and management problems that are entailed in large-scale, federally sponsored survey research, so as not to minimize the significance and complexity of the undertaking that is being proposed. The author tries to illustrate the need for a longitudinal study design beginning in the first grade that gives simultaneous attention to life cycle, cohort, and historical change.

Classification: Other (longitudinal study design)

267

Fetters, W. B. *High school graduates in 1972 and 1982.* Prepared for the National Planning Committee for the New National Longitudinal Survey, "High School and Beyond," Washington, D.C.: National Center for Education Statistics, October 1978.

This paper describes reasons for believing that the high school class of 1982 will differ substantially from the class of 1972. As examples, developments, trends, and events are outlined that may have left their mark on graduating seniors of 1977.

Some of the items listed could be useful in suggesting further NLS analyses.

Classification: Other

268

Haggstrom, G. W., & Morrison, P. A. *Investigating adolescent parenthood with the national longitudinal study of high school seniors.* Santa Monica, California: The Rand Corporation, February 1979.

This interim report is a study of adolescent parenthood based on the NLS which has tracked over 22,000 adolescents who are now in their early twenties and have experienced many of the near-term consequences of early parenthood.

Three areas of endeavor are treated. First, the authors describe procedures for creating variables that mark entry into marriage and commencement of parenthood for the NLS respondents, thereby rectifying serious deficiencies in the NLS data base. A technical discussion of these procedures is intended primarily for other researchers who may want to adopt these procedures in working with the same data set. Second, they provide a descriptive profile of four categories of respondents: late-adolescent parents, early-adult parents, adult parents, and nonparents. This profile affords interesting descriptive comparisons among parents and nonparents, as well as certain benchmark comparisons for validation purposes. Third, they develop a statistical model for gauging the consequences of early parenthood. This model addresses certain methodological issues in assessing consequences from data sets that contain data for both parents and nonparents.

Classification: Other

269

Kroll, A. K. *Discussant comments regarding NLS.* Presented at American Educational Research Association symposium at the annual meeting of the American Educational Research Association, New Orleans, Louisiana, 1973.

This summary covers issues concerning implications for counselors, the influencing of guidance practice, career pattern data, and various unresolved philosophical issues whereby the NLS could be used to provide information for federal policy development in the field of education.
Classification: Other (significance of NLS study)

270
Levinsohn, J. R., & McAdams, K. C. *The NLS data base design: A user survey.* Final report, Research Triangle Institute, Research Triangle Park, North Carolina, January 1978.

The focus of this paper is the NLS data base materials and their documentation. Its major purpose is to review user reaction to the NLS data base, its component files, and the documentation.

Reported are the results of an informal survey conducted from September 1976 to March 1977 of over 120 NLS data base users.

Topical areas covered include: (1) dissemination of data tapes and documentation, (2) user reaction to general tape format, (3) user reaction to coding of the data base, (4) user reaction to documentation, (5) data processing of the NLS data base, (6) additional data bases for the NLS, and (7) summary and recommendations.

In general, results indicate that the data base and supportive documentation have met with very favorable reactions. Three broad categories of desired user support were identified: (1) preparation of special analysis files, (2) dissemination of NLS materials and technical assistance, and (3) collection and editing of supplementary data to augment the data base.
Classification: Other (user survey)

271
Morrison, J. L. *The National Longitudinal Study (NLS) of the High School Class of 1972 data base: Implications for use in doctoral training programs in higher education.* Chapel Hill, North Carolina: University of North Carolina. Revised version of a paper presented to the annual meeting of the Association for the Study of Higher Education, Chicago, Illinois, 1978.

In this report, the author discusses the potential of the NLS for research training programs. It provides a rich data base for studies of the vocational, educational, and personal development of high school graduates and the psychological and social factors that contribute to that development. In addition, longitudinal data facilitates the use of recursive causal models in examining the impact and effects of college.

Limitations in the use of the data base are also mentioned. First variables central to research questions may be missing or must be artificially contrived from items not originally developed to measure that variable. Second, the data base is rather extensive (over 22,000 cases on over 2,000 variables) and bulky. It exists in an archival format that reports the raw questionnaire responses. Hence, it is an expensive and time consuming process to produce analysis files and results. Moreover, the data files are quite complex and require skilled programming assistance to produce working files necessary to reduce computer expenses. In addition, the NLS sample design requires certain weighting procedures in order to obtain unbiased estimates of population values, a requirement which may create some problems when using multivariate analyses. Finally, those analytical models which require using several variables simultaneously from the base year through several follow-ups will be adversely affected by the fact that data from all instruments are available for only 14,900 respondents. In addition, data from all respondents are missing for individual questonnaire items. Consequently, the degree to which one may generalize findings resulting from the use of these data will depend upon the complexity of the research model.
Classification: Other (conceptual model)

272
Nolfi, G. J., Fuller, W. C., Corrazzini, A. J., Epstein, W. H., Manski, C. F., Nelson, V. I., & Wise, D. A. *Recommendations for the national longitudinal survey of the class of 1979.* Cambridge, Massachusetts: University Consultants, Inc.

This report presents problems encountered with NLS '72 and suggestions for making the next NLS Cohort (the NORC High School and Beyond Study) more useful for general research purposes. Another goal was to expand the survey to enable researchers to examine questions which were unapproachable with the current NLS.

General recommendations were (1) to substitute personal interviews for mail questionnaires for the students, (2) to begin the survey in the ninth grade, (3) to reduce both the size of the sample and the number of schools covered, and (4) to obtain data at frequent intervals immediately after high school.
Classification: Other

273
Page, E. B., & Grandon, G. M. Family configuration and mental ability: Two theories contrasted with U.S. data. *American Educational Research Journal,* 16, (3), 257-272, Summer 1979. (Supported by

the University Research Foundation and a grant from the National Science Foundation to the Computer Center)

This study reports that the most popular current theory of family effects is the confluence theory, in which family size and birth order are argued to be major causal influences on human intelligence. The present article analyzes data from the National Longitudinal Study to put family size, birth order, and mental ability into better perspective.

The principal inference from this analysis is that a renowned social theory of intelligence, based on family configuration, has been eroded, and a traditional population of intelligence, here involving major group differences and admixture effects, has been supported. The article pointed to social class and race as strong contributing influences in intelligence; however, the evidence is not addressed to the question of the origins of those influences.

Findings indicate that children are not, necessarily, "dumber by the dozen;" that the familial influences (including those related to parents' social class and race) are strong indeed; but that there is not evidence for a strong, mutual, socially based enhancement of depression of mental ability, such as argued by the confluence theorists.

Classification: Other

274

Peng, S. S., Stafford, C. E., & Talbert, R. J. *National longitudinal study of the high school class of 1972 review and annotation of study reports.* Research Triangle Park, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, May 1977.

The primary purpose of this review was to establish an inventory of studies utilizing the NLS data base through the second follow-up, and to summarize the major findings of those studies. As of March 1977, documents using the NLS data had been collected and were briefly synthesized in this report.

Included in this report is an annotated bibliography of NLS studies, an author and subject index and a list of data file users. Also included is a description of the data base and a summary of use of the data as of March 1977.

Classification: Other

275

Rice, L. D., Wagner, A. P., Christoffel, P. H., & Tenison, L. J. *Lessons from experience, plans for the future, suggestions for the second cohort national longitudinal study of educational effects* (NCES No. 75-22). Washington, D.C.: College Entrance Examination Board, November 1976.

The purpose of this report is to point out difficulties in the 1972 NLS, suggesting specific changes that could be implemented in a second NLS cohort which would make the collected information more useful in understanding current and potential issues in the study of educational outcomes.

The suggestion is made that many of the analysis difficulties result from an extremely diverse and fragmented research design. A different subsample strategy is recommended. Emphasizing a limited number of specific research objectives this approach calls for administering shorter questionnaires to subsamples of the NLS.

Classification: Other

276

Stafford, C. E. *A KWIC-keyword in context—Index and author index of NLS library materials.* Research Triangle Park, North Carolina: Research Triangle Institute, May 1979.

In this report, titles of materials in the NLS Library are organized into two indexes. The purpose of Index A, the Keyword in Context (KWIC) Index, is to list the reports in a particularly useful form: the reports are arranged alphabetically by the keyword in each title, serving as a guide to the reports referring to the NLS, and as a reference or source for researchers contemplating purchase of the data file and its documentation. Index B, The Author Index, lists all reports by the authors, arranging each according to the year written, beginning with the earliest date.

Classification: Other (library index)

277

Talbert, R. J. *Privacy, confidentiality, and the national longitudinal study.* Research Triangle Park, North Carolina: Research Triangle Institute, January 1979.

Although the National Longitudinal Study was initiated before the enactment of the Privacy Act and the Buckley Amendment, the importance of the privacy of the respondents and the confidentiality of the data have been recognized and provided for throughout all the varied activities of the project. The passage of these laws along with increased public and professional concern about large-scale data-gathering efforts, however, prompted NCES to request the preparation of this review. The primary purpose of this report is to serve as a reference for NCES and RTI personnel (and other NLS data users) in matters of privacy and confidentiality. It is an investigation of the impact of past and current privacy legislation on the operations and use of the NLS survey. It is not a general investigation of the issues of privacy and the government or a global policy statement for government data collection. The paper discusses the concept of privacy, relevant legislation and regulations, protective procedures which have been undertaken to date, and current and potential problems for NLS (including NLS 1980). The report concludes with recommendations and guidelines for the continued protection of the respondents.

Classification: Other (privacy, confidentiality)

278

Thornton, C. H., Jr. *The social psychological model of educational attainment: Some notable race differences.* Chapel Hill, North Carolina: University of North Carolina, April 1976.

According to this study, there has been too little research in the area of educational and occupational attainment that considers the differential influences of the basic processes on differing racial groups. Further, the research works which do incorporate differing racial groups into the "basic" model have not been comprehensive. Another problem is that most of the larger studies, which have either a national or state-wide sample, were done over a decade ago. Therefore, the purpose of this study is to re-test the "basic" model in light of structural changes in our society that call into question the relationships examined in the model.

The model presented here is essentially a replication of Sewell's model of educational attainment. The models were quantified by computing all possible paths, as a first step. The computation of all paths was considered necessary because of the causal sequence implied by the model. The second step consisted of dropping all paths with a coefficient below 10, and the remaining paths were reestimated. The present analysis is limited to only black and white males residing in the South.

The data for the present study are a part of the NLS. The total number of black males in our study sample is 159, while the total number of white males is 1,170.

For future research efforts, knowledge could be extended by examining interactive and nonrecursive relationships within the "basic" model, as well as contextual influences that might serve to condition hypothesized relations within the model (i.e. differing schools and/or neighborhood types).

Classification: Other (social psychological model)

279

Venti, S., & Wise, D. A. *Test scores, educational opportunities, and individual choice.* John Fitzgerald Kennedy School of Government, Harvard University, June 1980: Number 92D. (Grant from Exxon Education Foundation and OE, Department of HEW contract)

The goal of this paper is to provide quantitative information on the current effect of SAT scores and other individual attributes on the college preferences of high school graduates and the admission decisions of colleges and universities.

The analysis is based on a discrete-continuous random choice model that yields joint estimates of student application decisions, the college quality preferences of students, and college admission decisions.

One finding is that scholastic aptitude scores have a much greater influence on student preferences for college versus no college, and for college quality, than on admission decisions of colleges. Although among the variables considered, test scores bear the strongest relationship to postsecondary school preferences and opportunities, other individual characteristics are also important determinants of these decisions. In particular, even though there is a substantial correlation between test scores and high school performance, given test scores, postsecondary school preferences and ultimate opportunities are substantially affected by performance in high school. While SAT scores certainly exclude some persons from some schools, findings indicate that they do not represent a dominating constraint on the college opportunities of high school graduates.

Estimates are based on a random sample of approximately 5,000 of the total NLS sample; data were also used from the initial and first follow-up surveys.

Classification: Other (SAT scores)

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